



Service Manual

Service Manual

GD330



Model : GD330



REVISED HISTORY

DATE	ISSUE	CONTENTS OF CHANGES	S/W VERSION
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The information in this manual is subject to change without notice and should not be construed as a commitment by LGE Inc. Furthermore, LGE Inc. reserves the right, without notice, to make changes to equipment design as advances in engineering and manufacturing methods warrant.

This manual provides the information necessary to install, program, operate and maintain the GD330.

1. INTRODUCTION

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1. INTRODUCTION

1.1 Purpose

This manual provides the information necessary to repair, calibration, description and download the features of the GD330

1.2 Regulatory Information

A. Security

Toll fraud, the unauthorized use of telecommunications system by an unauthorized part (for example, persons other than your company's employees, agents, subcontractors, or person working on your company's behalf) can result in substantial additional charges you're your telecommunications services. System users are responsible for the security of own system. There are may be risks of toll fraud associated with your telecommunications system. System users are responsible for programming and configuring the equipment to prevent unauthorized use. LGE does not warrant that this product is immune from the above case but will prevent unauthorized use of common-carrier telecommunication service of facilities accessed through or connected to it. LGE will not be responsible for any charges that result from such unauthorized use.

B. Incidence of Harm

If a telephone company determines that the equipment provided to customer is faulty and possibly causing harm or interruption in service to the telephone network, it should disconnect telephone service until repair can be done. A telephone company may temporarily disconnect service as long as repair is not done.

C. Changes in Service

A local telephone company may make changes in its communications facilities or procedure. If these changes could reasonably be expected to affect the use of the GD330 or compatibility with the network, the telephone company is required to give advanced written notice to the user, allowing the user to take appropriate steps to maintain telephone service.

D. Maintenance Limitations

Maintenance limitations on the GD330 must be performed only by the LGE or its authorized agent. The user may not make any changes and/or repairs except as specifically noted in this manual. Therefore, note that unauthorized alternations or repair may affect the regulatory status of the system and may void any remaining warranty.

1. INTRODUCTION

E. Notice of Radiated Emissions

The GD330 complies with rules regarding radiation and radio frequency emission as defined by local regulatory agencies. In accordance with these agencies, you may be required to provide information such as the following to the end user.

F. Pictures

The pictures in this manual are for illustrative purposes only; your actual hardware may look slightly different.

G. Interference and Attenuation

An GD330 may interfere with sensitive laboratory equipment, medical equipment, etc. Interference from unsuppressed engines or electric motors may cause problems.

H. Electrostatic Sensitive Devices

ATTENTION

Boards, which contain Electrostatic Sensitive Device (ESD), are indicated by the  sign. Following information is ESD handling:

- Service personnel should ground themselves by using a wrist strap when exchange system boards.
- When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.
- Use a suitable, grounded soldering iron.
- Keep sensitive parts in these protective packages until these are used.
- When returning system boards or parts like EEPROM to the factory, use the protective package as described.

1.3 Abbreviations

For the purposes of this manual, following abbreviations apply:

APC	Automatic Power Control
BB	GD330
BER	Bit Error Ratio
CC-CV	Constant Current – Constant Voltage
DAC	Digital to Analog Converter
DCS	Digital Communication System
dBm	dB relative to 1 milliwatt
DSP	Digital Signal Processing
EEPROM	Electrical Erasable Programmable Read-Only Memory
EL	Electroluminescence
ESD	Electrostatic Discharge
FPCB	Flexible Printed Circuit Board
GMSK	Gaussian Minimum Shift Keying
GPB	General Purpose Interface Bus
GSM	Global System for Mobile Communications
IPI	International Portable User Identity
IF	Intermediate Frequency
LCD	Liquid Crystal Display
LDO	Low Drop Output
LED	Light Emitting Diode
OPLL	Offset Phase Locked Loop
PAM	Power Amplifier Module
PCB	Printed Circuit Board
PGA	Programmable Gain Amplifier
PLL	Phase Locked Loop
PSTN	Public Switched Telephone Network
RF	Radio Frequency
RLR	Receiving Loudness Rating
RMS	Root Mean Square
RTC	Real Time Clock
FEM	Front End Module
SIM	Subscriber Identity Module
SLR	Sending Loudness Rating
SRAM	Static Random Access Memory
STMR	Side Tone Masking Rating
TA	Travel Adapter
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
UART	Universal Asynchronous Receiver/Transmitter
VCO	Voltage Controlled Oscillator
VCTCXO	Voltage Control Temperature Compensated Crystal Oscillator
WAP	Wireless Application Protocol

2. GENERAL PERFORMANCE

2. GENERAL PERFORMANCE

2.1 Product Name

GD330 : GPRS Class 10 / EDGE Class 10

2.2 Supporting Standard

Item	Feature	Comment
Supporting Standard	GD330 : GSM850/GSM900/DCS1800/PCS1900 Phase 2+(include AMR) SIM Toolkit : Class 1, 2, 3	
Frequency Range	GSM850 TX : 824 – 849 MHz GSM850 RX : 869 – 894 MHz GSM900 Tx : 880 – 915 MHz GSM900 Rx : 925 – 960 MHz DCS1800 TX : 1710 – 1785 MHz DCS1800 RX : 1805 – 1880 MHz PCS1900 TX : 1850 – 1910 MHz PCS1900 RX : 1930 – 1990 MHz	
Application Standard	WAP 2.0, JAVA 2.0	

2.3 Main Parts: GSM Solution

Item	Part Name	Comment
Digital Baseband	Neptune (D761811BZVL): TI	
Analog Baseband	Triton (TWL3029): TI	
RF Chip	B6PLE: RENESAS	

2. GENERAL PERFORMANCE

2.4 H/W Features

Item		Feature	Comment
Form Factor		Slide	
Battery		1) Capacity Standard : Li-ion 800 mAh	
		2) Packing Type : Inner Pack	
Size		Standard : 102.7x50.8x11.9 mm	
Weight		102g(TBD)	With Battery
Volume		7,550 mm ³ (TBD)	
PCB		Staggerd 10Layers , 0.8t	
Stand by time		450 hrs.	@ Paging Period 9
Charging time		3 hrs	@ Power Off / 800mAh
Talk time		Min : 5.5 hrs @ Power Level 10	@ GSM850, EGSM / 800mAh
RX sensitivity		GSM850 : -105 dBm EGSM : -105 dBm DCS 1800 : -105 dBm PCS 1900 : -105 dBm	
TX output power	GSM/ GPRS	GSM850 : 33 dBm EGSM : 33 dBm DCS 1800 : 30 dBm PCS 1900 : 30 dBm	Class4 (GSM850) Class4 (EGSM) Class1 (DCS) Class1 (PCS)
	EDGE	GSM850 : 27 dBm EGSM : 27 dBm DCS 1800 : 26 dBm PCS 1900 : 26 dBm	E2 (GSM850) E2 (EGSM) E2 (DCS) E2 (PCS)
GPRS compatibility		GPRS Class 10	
EDGE compatibility		EDGE Class 10	
SIM card type		Plug-In SIM 3V /1.8V	
Display		Main LCD 2.2 inch 262K Color TFT (240 x 320 pixel) Backlight : White LED	
Built-in Camera		2M CMOS Camera, Fixed Focus	One button access
Status Indicator		None	

2. GENERAL PERFORMANCE

ANT	Main : Internal Fixed Type Blue tooth : Internal Chip Type	
Keypad	Alphanumeric Key : 12 Function Key : 6 Navigation : 5 Side Key : 3 Total No of Keys : 26	< Function Key> Soft Menu left (Touch sensor), Soft Menu right (Touch sensor), Multi function , SEND, CLR, End <Navigation> F1, F2, F3, F4, OK, <Side Key> Volume up/down, CAM
System connector	18 Pin	
Ear Phone Jack	18pin, Stereo	
PC synchronization	Yes	
Memory	NAND Flash : 1Gbit SDRAM : 512Mbit	
Speech coding	FR, EFR, HR, AMR	
Data & Fax	Built in Data & Fax support	
Vibrator	Built in Vibrator	
Blue Tooth	HSP, HFP, OPP, FTP(server), BPP, A2DP, AVRCP	
MIDI(for Buzzer Function)	SW Decoded 64Poly,MP3 ringtone	
Music Player	MP3/ AAC/AAC+	
Camcorder	MPEG4, H.263	
Voice Recording	Yes	
Speaker Phone mode Support	Yes	
Travel Adapter	Yes	
CDROM	No	
Stereo Headset	Yes	
Data Cable	No	
T-Flash (External Memory)	No	T-Flash socket

2.5 S/W Features

Item	Feature	Comment
RSSI	0 ~ 7 Levels	
Battery Charging	0 ~ 3 Levels	
Key Volume	0 ~ 7 Level	
Audio Volume	0 ~ 7 Level	
Time / Date Display	Yes	NITZ
Multi-Language	Yes	Basic:English
Quick Access Mode	Yes	
PC Sync	Schedule / Phonebook / MEMO / SMS / Download(Photo, file)	
Speed Dial	Yes	
Profile	Yes	
Phone Book	Field: Name,Mobile,Home,Office,Fax,E-mail,Group Ringtone,Picture, anniversary	Entry: 1000
Last Dial Number	Yes (50)	
Last Received Number	Yes (50)	
Last Missed Number	Yes (50)	
Fixed Dial Number	Yes	
Service Dial Number	Yes	
Own Number	Yes	
Voice recoder	Yes	
Call Retrieve	Yes	
Network Selection	Automatic	
Mute	Yes	
Call Divert	Yes	
Call Barring	Yes	
Call Duration	Yes	
SMS	Yes	
MMS	Yes	Incomming : 300KB Outgoing : 300KB

2. GENERAL PERFORMANCE

Cell Broadcast	Yes	
Download	Over the WAP	
Game	YES	
Calendar	Yes	
Memo	50(80 character)	scheduler
World Clock	Yes	
Unit Convert	Currency, Surface, Length, Weight, Temperature, Volume, Velocity	
Calculator	Yes	
Wall Paper	Yes	
WAP Browser	Over WAP 2.0	Teleca Q7.0
Download Melody / Wallpaper	Yes	
SIM Lock	Yes	Service Provider / Network Lock
SIM Toolkit	Class 1, 2, 3	
Camera	Yes	2M F/F
JAVA	Yes	CLDC V1.1 / MIDP V2.0
IrDA	No	
Blue tooth	Yes	V2.0 HSP, HFP, OPP, FTP(server), BPP, A2DP, AVRCP
GPRS	Yes	Class 10
EDGE	Yes	Class 10
Conference Call	Yes	
DTMF	Yes	
Memo pad	Yes	
AMR	Yes	
Sync ML	No	
IM	No	
Voice Dial	No	
Email	Yes	

3. TECHNICAL BRIEF

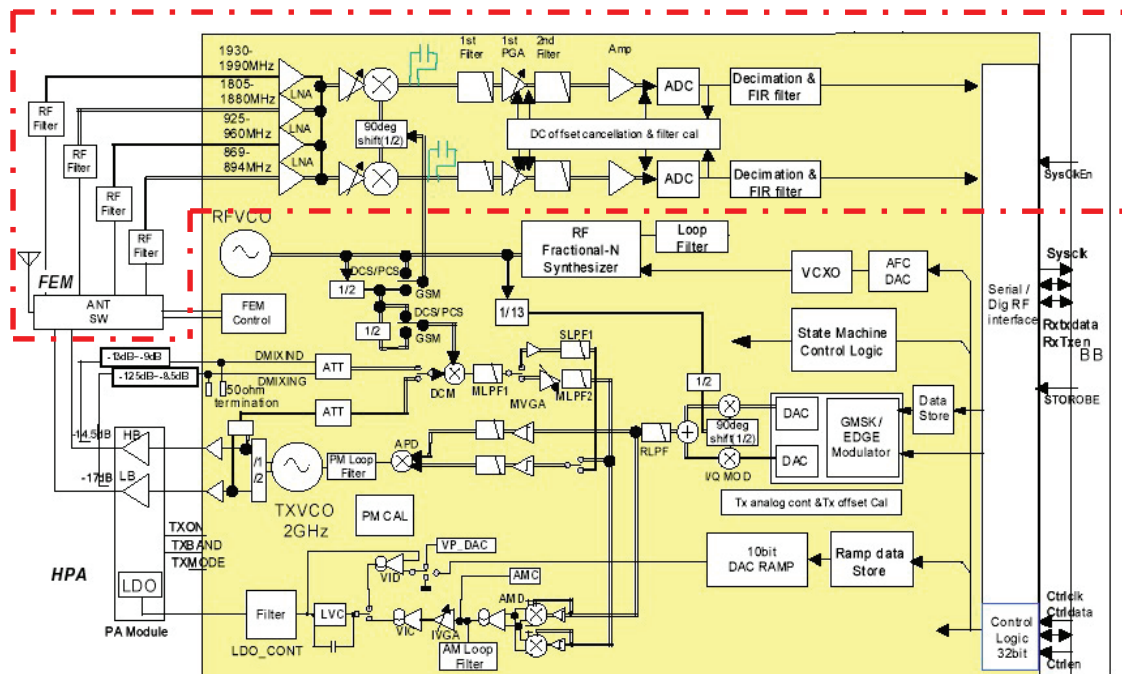
3.1. General Description

The RF part consists of a transmitter, a receiver, a synthesizer, a voltage supply and a DCXO part. The main RF Chipset B6PLD is a highly integrated RF transceiver IC FOR Digital Interface of GSM 850,DCS1800 and PCS1900 quad-band cellular systems. The B6PLD incorporates EDGE transceiver capability, quad R low-noise amplifiers (LNAs). Direct conversion mixers, a programmable gain amplifier(PGA) with DC offset and frequency response correction, ADC, Digital filter, Digital Interface, fully integrated VCOs, an RF fractional-N synthesizer, a low-noise offset PLL transmitter, Digital modulator, TXDAC, RAMPDAC, and AFCDAC. The B6PLD includes state machine control through serial programming. All functions operate down to 2.67V and are housed in a 72-pin BGA package. Hence the B6PLD can form a small size transceiver handset for quad band EDGE transceiver.

3.2. RF Part

3.2.1 Receiver Part

The B6PLD receiver supports quad band, so the front-end incorporates four LNAs and two mixers. The incoming RF signals are mixed directly down to I/Q baseband by the front-end block. This incorporates four LNAs/four buffers and two Gilbert Cell mixer blocks optimized for operation at 850MHz, 900MHz, 1800MHz and 1900MHz respectively. The front-end block is followed by two closely matched baseband amplifier chains. These include distributed low pass filtering, one switched gain stage and one fixed gain stage. In addition, the baseband section integrates A/D and D/A converters which provide automatic on-chip correction of DC offsets.



<Fig.3-1> Receiver Part Block Diagram

3. TECHNICAL BRIEF

3.2.1.1 Baseband PGA/Low pass Filter Specifications

The baseband programmable amplifier comprises one stage with variable gain followed by a fixed gain amplifier. The overall gain control range is 36dB with 6dB Steps. The filtering is provided by a single R/C low pass filter with an on-chip capacitor followed by on-chip Chebychev low pass filters. The filters have been specified to achieve maximal group delay flatness in the pass-band combined with the required levels of suppression of interfering signals. The distribution of the gain and filtering has been designed to ensure that the receiver does not compress under blocking conditions. The final fixed gain amplifier is included to match the on-chip levels to the input dynamic range of the ADC.

3.2.1.2 DC offset auto-calibration system

B6PLD implements a system for cancelling the DC offsets in the baseband programmable gain amplifiers(PGA). This prevents a small DC offset at the input giving a large DC offset at the output, even at high gain settings. When the B6PLD receiver is performing an auto-calibration, the sequencer cancels the offsets locally around the PGA, then the Digital filter. The system includes switches to short out the signal path whilst the cancellation is occurring. The switches are opened in sequence as the calibration progresses. For PGA the A/D converter system employs a successive approximation technique and achieves 6 bit resolution. The PGA stage has an associated 6 bit current DAC which cancels the DC offset at the output. The sequencer ensures that on-chip filters have sufficient time to settle before applying correction in the next digital offset cancellation stage.

3.2.2 Transmitter part

The B6PLD transmitter is capable of both GMSK and 8-PSK modulation, to support for conventional GSM and EDGE. B6PLD integrates all loop filters to configure both PM loop and AM loop. See block diagram below.

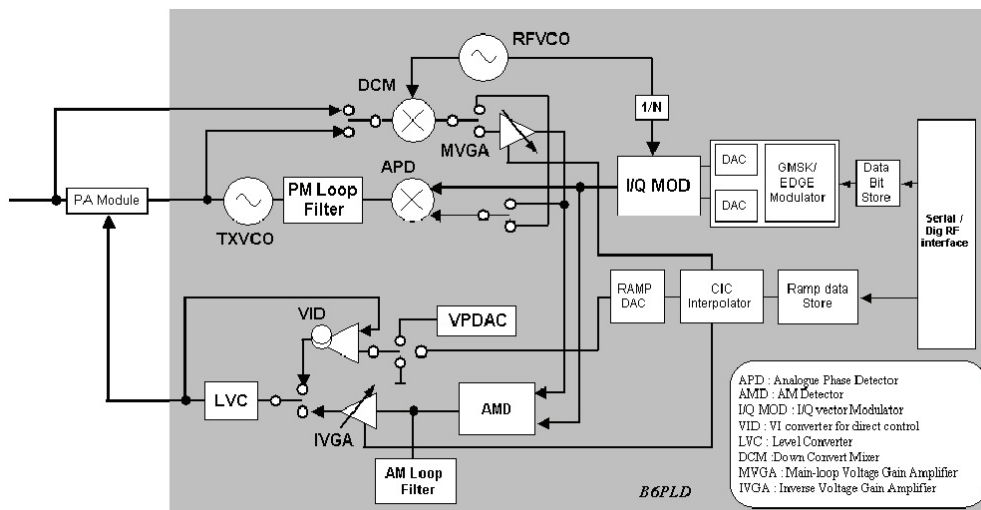


Fig. <Fig. 3-2> Simplified Block diagram for TX part

3.2.2.1 Polar Loop Structure

Three main functions are identified in the transmitter architecture; I/Q vector modulation at IF frequency, amplitude and phase loop at IF/RF frequencies and power amplification.

3.2.3 RF Synthesizer

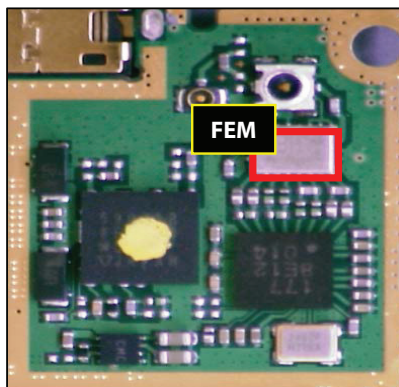
RF Synthesiser

Operating frequency	Rx mode	
		GSM850 3476.8MHz ~ 3575.2MHz
		GSM900 3700.8MHz ~ 3839.2MHz
		DCS1800 3610.4MHz ~ 3759.6MHz
		PCS1900 3860.4MHz ~ 3979.6MHz
	Tx mode ([IF1:IF0]=[0:1])	GSM850 3626.48MHz ~ 3734.72MHz
		GSM900 3872.88MHz ~ 4025.12MHz
		DCS1800 3583.27MHz ~ 3739.58MHz
		PCS1900 3876.60MHz ~ 4001.48MHz
	Tx mode ([IF1:IF0]=[1:0])	GSM850 3596.50MHz ~ 3703.85MHz
		GSM900 3840.87MHz ~ 3991.85MHz
		DCS1800 3569.11MHz ~ 3724.80MHz
		PCS1900 3861.28MHz ~ 3985.66MHz
	Tx mode ([IF1:IF0]=[1:1])	GSM850 3571.53MHz ~ 3678.13MHz
		GSM900 3814.20MHz ~ 3964.13MHz
		DCS1800 3557.22MHz ~ 3712.38MHz
		PCS1900 3848.42MHz ~ 3972.38MHz

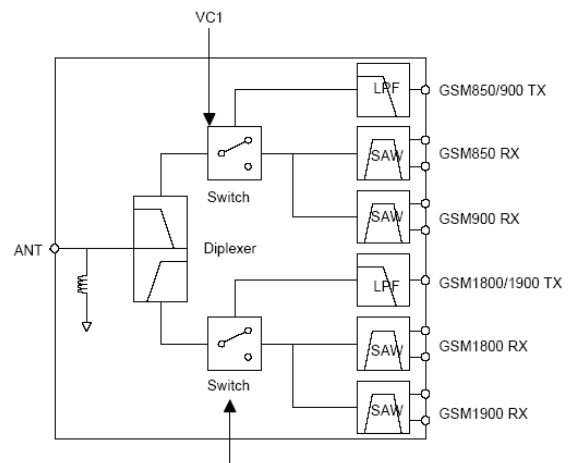
3.2.4 Front End Module Specification

3.2.4.1 Block Diagram and Internal Matching Condition

3.2.4.1.1 GD330



<Fig. 3-3> FEM Placement



<Fig. 3-4> FEM Block diagramt

The B6PLE integrates Front End Module control (FEM control). Word 6-12 is assigned for trigger of control signal from B6PLE. FEMC1 and FEMC2 are interface between B6PLE and FEM. The combination of output is decoded from word 1. FEMC1 and FEMC2 are assigned for Low and High band respectively.

3. TECHNICAL BRIEF

3.2.4.2 Logic Table for Selection

2Control Logic			
Mode	VC1 [V]	VC2 [V]	Current [mA]
GSM850/900 TX	2.6-3.0	0	6.0-10.0
GSM1800/1900 TX	0	2.6-3.0	6.0-10.0
GSM850 RX	0	0	0
GSM900 RX	0	0	0
GSM1800 RX	0	0	0
GSM1900 RX	0	0	0

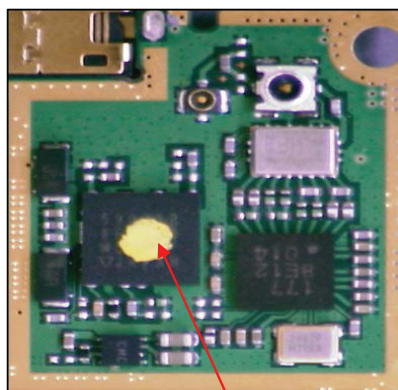
<Table 3-1> Band SW Logic Table

3.2.5 Power Amplifier Module for Quad-band GSM/GPRS/EDGE

3.2.5.1 PAM Specification

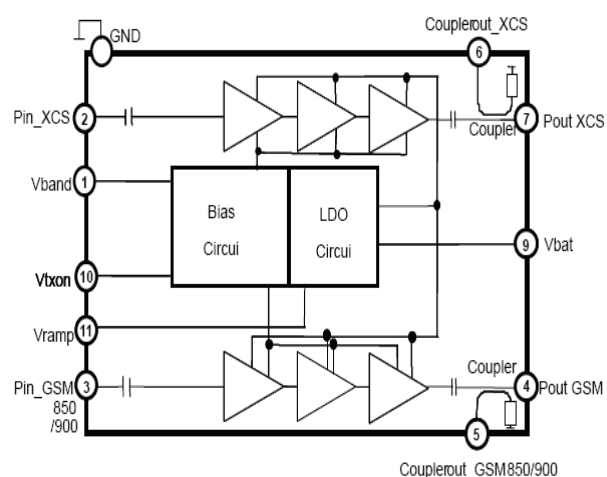
- Quad band GSM, GPRS & Polar Loop EDGE Amplifier
- For 3.5V nominal operation
- Built-in LDO circuit
- GPRS Class 12 operation compatible
- Integrated directional coupler

3.2.5.2 Circuit Diagram and peripheral components



PAM

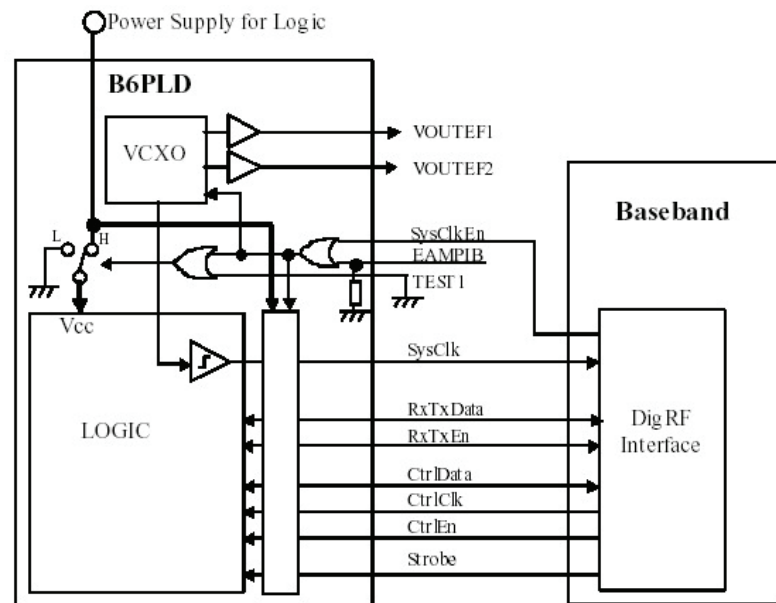
<Fig. 3-5> PAM Placement



<Fig. 3-6> PAM block diagram

3.2.6 Digital Core

3.2.6.1 Digital Interface Block Diagram



<Fig.3-7> Digital Interface Block diagram

3.2.6.2 Control system and digital interface

The B6PLD is a RF transceiver IC for GSM850, GSM900, DCS1800 and PCS1900 quad band cellular system, and incorporates EDGE transceiver capability. The B6PLD has a digital interface connection to the baseband processor. This interface complies with the digital interface specification DigRF standard v112.

The digital interface consists of two separate interface connections; (1) the control interface, (2) the data interface, and a system clock on/off control signal and a precise timing signal. These are realized by eight signal lines in B6PLD (Look at Fig1.1 above)

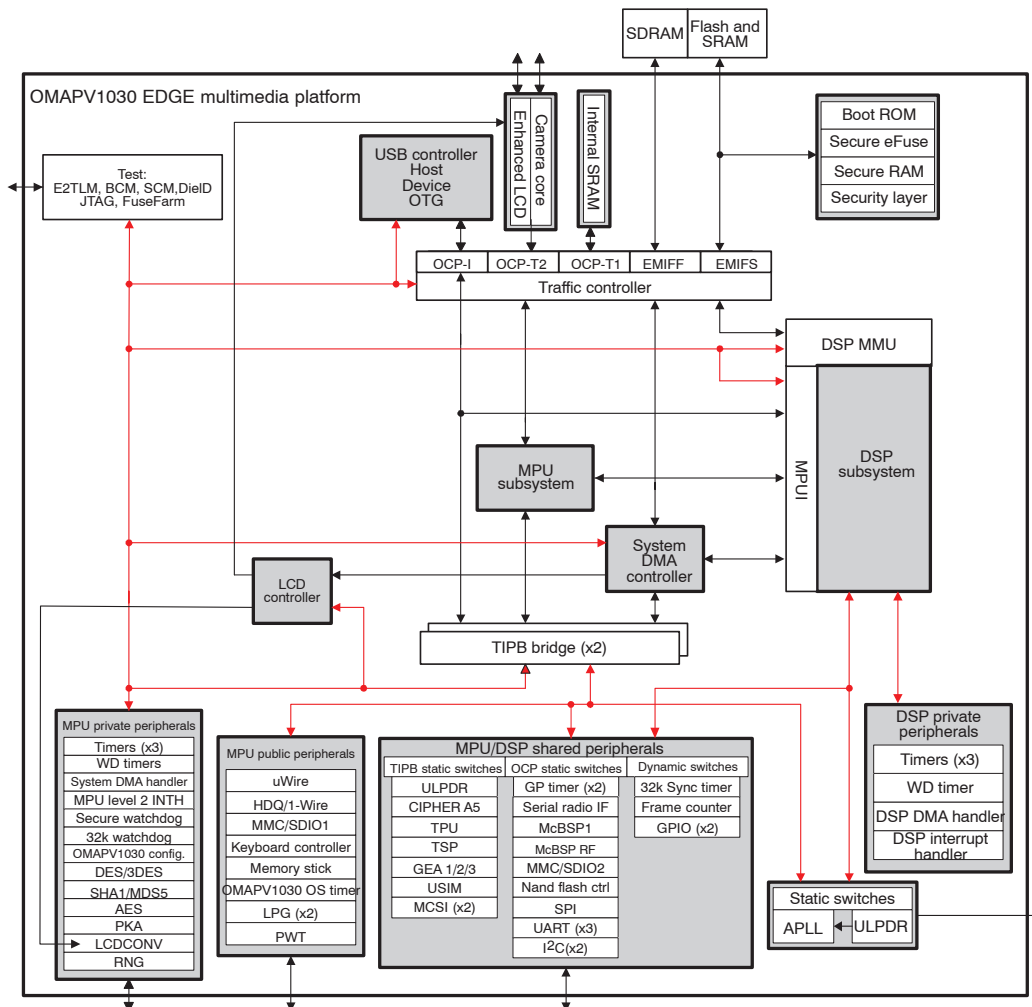
- The control interface is used to configure the B6PLD for RX and TX operation, transfers of control data for several built-in circuits, and for triggering the events. The control interface comprise a bi-directional 3-wire serial interface with the three signal lines CtrlData, CtrlEn and CtrlClk accessing the control registers in B6PLD by transferring the control words.

- The data interface is used to transfer transmit modulation symbols and receive IQ-sampling data. The data interface comprises a single serial bus with the three signal lines RxTxData, RxTxEn and SysClk. The SysClk is used for system clock to baseband.

- The SsClkEn signal enables the SysClk output and powers the 26MHz oscillator on. When the SysClkEn is negated, the SysClk is held low, and if the TEST1 pin is low by the default settings, the logic power supply by typical 1.8 volts to the internal core logic circuits is also switched off.

3. TECHNICAL BRIEF

3.3. Digital Baseband



<Fig.6> OMAPV1030 Block Diagram

3.3.1 General description

The OMAPV1030 E-GPRS multimedia device belongs to the Texas Instruments OMAP-Vox_ processors family. It combines both a modem engine and an application engine. Memory and CPU resources are shared between modem and application processing.

The OMAPV1030 chip is based on the OMAP3.4 architecture and integrates two processor subsystems:

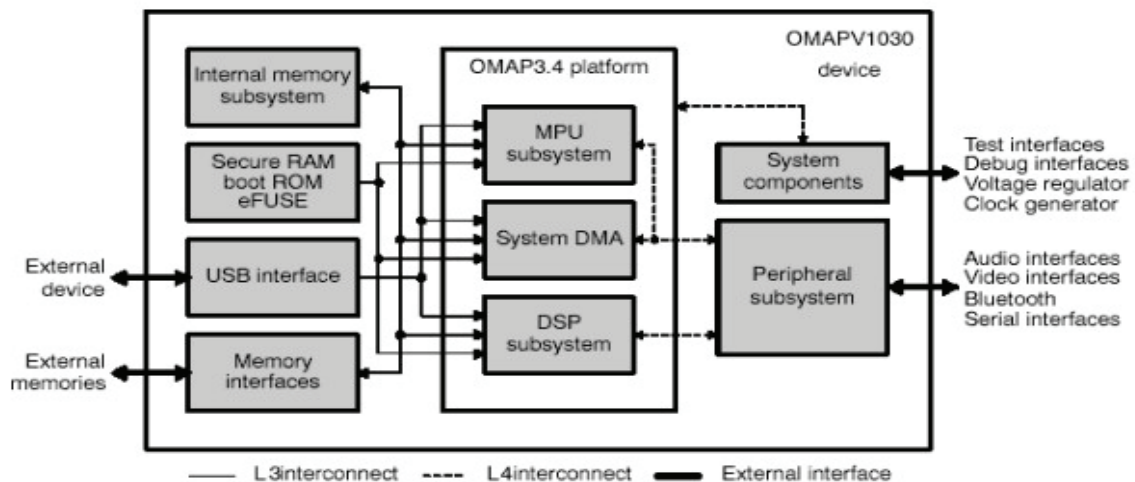
- An MPU subsystem based on an ARM926EJ-S
 - A DSP subsystem based on a UMA 2.6 architecture integrating a C55x DSP core
- The OMAPV1030's silicon process technology is a c027.0 90-nm digital CMOS.

3.3.2 Block Description

The OMAPV1030 E-GPRS multimedia device is based on an OMAP3.4 platform that integrates:

- _ The MPU subsystem
- _ The DSP subsystem
- _ A system DMA
- _ A traffic controller providing:
- _ External memory interfaces with:
 - _ A slow interface (EMIFS) to ROM, SRAM, FLASH memories
 - _ A fast interface (EMIFF) to SDRAM memories
- _ Layer 3 (L3) interconnect made of two OCP target ports (OCP-T1 and OCP-T2) and one OCP initiator port (OCP-I)
- _ Layer 4 (L4) interconnect made of two DSP peripheral busses (private DSP TIPB and shared DSP TIPB) and two MPU peripheral busses (public MPU TIPB and private MPU TIPB)
- _ Clock management
- _ A set of processor peripherals:
 - _ Three 32-bit timers, a 16-bit Watchdog timer, and an interrupt handler for the MPU
 - _ Three 32-bit timers, a 16-bit Watchdog timer, and a 2nd-level interrupt handler for the DSP
- _ Test and debug interfaces (JTAG, Window Tracer)
- _ Trace capabilities: ETM9 and Ctools

The other OMAPV1030 modules or subsystems are connected to the OMAP3.4 platform through the L3 and L4 interconnects.



<Fig.7> OMAPV1030 Top-Level Architecture Overview

The OMAP3.4 platform is the computing core of the device. The other OMAPV1030 components are organized as follows:

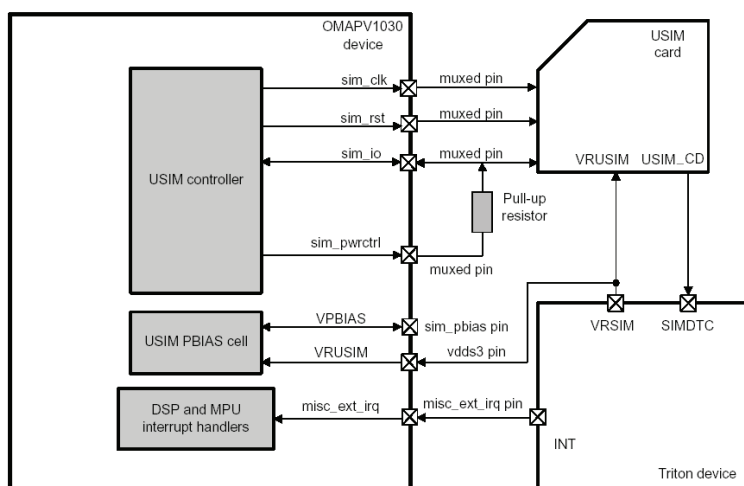
- _ The internal memory subsystem is made of a single-port 256K-bit shared internal SRAM.
- _ The security subsystem is a set of several components, including dedicated a secure mode to run secure applications.
- _ A master-slave USB module provides an external interface supporting high data transfer rates between the OMAPV1030 and external application

3. TECHNICAL BRIEF

3.3.3 SIM interface

SIM interface scheme is shown in below.

SIM_IO, SIM_CLK, SIM_RST, SIM_PWRCTRL ports are used to communicate DBB via ABB with plugged sim card and the LDO (VRSIM) in ABB enables operate 1.8V to 2.5V to search SIM card



<Fig.9> SIM Interface

SIM_CLK : SIM Card reference clock
SIM_RST : SIM Card async/sync reset
SIM_PWCTRL : SIM Card power activation
SIM_IO : SIM Card bi-directional data line
VRUSIM(Power supply VCC) : 3 V±10% (class B) or 1.8 V±10% (class C)
Misc_ext_irq : USIM card presence detection (USIM_CD) purposes.

3.3.4 UART Interface

KM710d has Three UART Drivers as follow :

- UART1 : USB - UART2 : ETM, Calibration - UART3 : AT command, Fax_modem, Bluetooth

UART1(USB)		
Resource	Name	Description
USB_DP	DP	Data
USB_DM	DM	Data
USB_PWR	POWER	USB_POWER
VBUS	VBUS	USB_Detect
UART2 (ETM)		
DEBUG_RX	RX	Receive Data(UART2)
DEBUG_TX	TX	Transmit Data(UART2)
UART3 (Bluetooth)		
UART3_RXD	UART3_RXD	Receive Data
UART3_TXD	UART3_TXD	Transmit Data
UART3_RTS	UART3_RTS	Request To Send
UART3_CTS	UART3_CTS	Clear To Send

<Table.2> UART Interface Spec

3.3.5 GPIO Map

GD330 GPIO(General Purpose Input/Output) Map, describing application, I/O state, and enable level, is shown in below table 3.

gpio_1	W21	IO	gpio_1	Light sensor Gain 1
gpio_2	J15	IO	gpio_2	SYSBOOT [0] Vibrator_EN
gpio_4	U19	IO	gpio_4	USB Booting Mode
gpio_5	R18	IO	elcd_data_16	Light sensor Detector
gpio_6	V20	IO	gpio_6	SYSBOOT [2] _FM_RST
gpio_7	K14	IO	elcd_te	LCD Vsync Mode
gpio_8	W17	IO	gpio_8	Bluetooth Reset
gpio_9	V16	IO	gpio_9	SYSBOOT [3]
gpio_10	Y16	IO	gpio_10	T-Flash detect
gpio_11	R9	IO	emifs_fadd_17	_TCH_RST
gpio_12	G9	IO	gpio_12	Camera Reset
gpio_13	Y18	IO	gpio_13	TCH_I2C_SCL
gpio_16	V17	IO	gpio_16	Camera LDO(1.5v) Enable
gpio_17	H10	IO	gpio_17	SYSBOOT [4]
gpio_18	V19	IO	gpio_18	Slide detect
gpio_19	AA12	IO	gpio_19	TOUCH_LDO_EN
gpio_26	D17	IO	digitalrf_rx_cs	_CAM_PWDN
gpio_27	V18	IO	spi_data_mosi	Remote Power on
gpio_28	E18	IO	digitalrf_rx_clk	CAM_LDO_EN
gpio_29	C18	IO	digitalrf_tx_c	Do not use for output
gpio_30	Y8	IO	emifs_fadd_18	FM radio Interrupt
gpio_33	P13	IO	gpio_33	
gpio_43	Y12	IO	gpio_43	End Of Charging
gpio_45	AA7	IO	emifs_fadd_19	MIC Bias Enable
gpio_46	B12	IO	gpio_46	TCH_I2C_SDA
gpio_47	G13	IO	gpio_47	Ear Jack detect
gpio_57	R10	IO	emifs_fadd_21	Hook Detect
gpio_59	D19	IO	digitalrf_rx_data	LCD Back light Control
gpio_60	B18	IO	digitalrf_rxen	LCD ID (High : Sharp, Low : LGIT)
gpio_63	V21	IO	elcd_data_17	Charging Enable

<Table.3> GPIO Map

3.4.1 General Description

The purpose of the Triton device is to provide to platforms the following resources:

-

3.4.2 Audio Signal Processing & Interface

The Audio module consists of a Voice Codec dedicated to mobile telephone terminal application and a Stereo path.

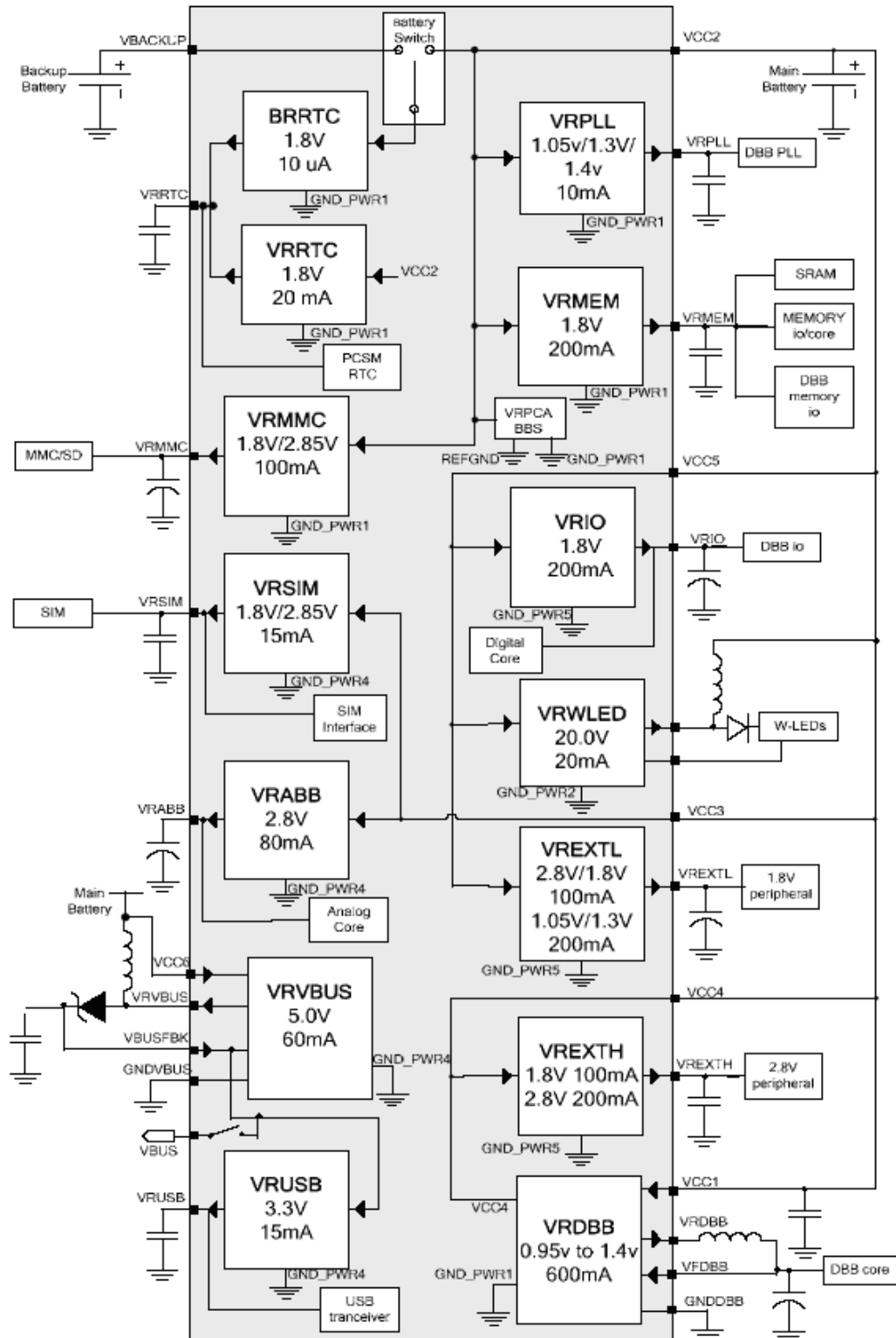
- The Voice Codec circuit processes analog audio components in the uplink path and transmits the converted data to the DSP speech coder through the voice serial port (VSP). In the downlink path, the Voice Codec converts the digital samples of speech data received from the DSP via the VSP port into analog audio signals. The Voice Codec supports a 8kHz (default narrowband mode) to a 16kHz(wideband mode) sampling frequency.
- The Stereo path converts audio digital samples received from the I2S serial interface into analog audio. It supports all standard frequencies from 8kHz to 48kHz (8, 11.025, 12, 22.05, 24, 32, 44.1 and 48kHz).
- Two included PLLs provide the suitable system clocks to the Voice and Stereo circuitry (ADC, DACs, Digital Filters, Digital interfaces). The Audio module supports 3 possible input master clocks : 12MHz, 13MHz and 19.2MHz.

3.4.3 Power Resources

The power supply module of Triton generates the different power supplies required by Triton, the processors and the external peripherals.

VRPLL..	VRPLL (programmable LDO, 1.05/1.3/1.4V), ADPLL, APLL and the sliger
VRMEM..	VRMEM (LDO, 1.8V), external SRAM, DEB memory interface..
VRIO..	VRIO (LDO, 1.8V), DEB and TWL3029 I/Os.. TWL3029 digital core..
VRMMC..	VRMMC (programmable LDO, 1.8V, 2.85v), MMC/SD modules..
VRSIM..	VRSIM (programmable LDO, 1.8V, 2.85v), SIM-card..
VRABB..	VRABB (LDO, 2.8V), TWL3029 analogue blocks..
VRTC..	VRTC (LDO, 1.8V), TWL3029 RTC, DEB I/Os, PM state machine..
VRUSB..	VRUSB (LDO, 3.3v), USB transceiver..
VREXTH..	VREXTH (programmable LDO, 1.8V, 2.8v), optional external LDO..
VREXTL..	VREXTL (programmable LDO, 1.8V, 2.8v), optional external LDO..
VRVBUS..	VRVBUS (step-up DCDC, 5.0v), VRUSB LDO input voltage reference..
VRWLED..	VRWLED (step-up DCDC, 20.0v), three series white LEDs driver..
VRDEB..	VRDEB (step-down DCDC, from 0.95 up to 1.4v, 30mV steps), DEB core..

3. TECHNICAL BRIEF



<Fig.12> Power Supply Scheme

3.4.4 Monitoring ADC

The monitoring ADC (MADC) consists of a 10-bit analog-to-digital converter (ADC) combined with an 11-input analog multiplexer. The ADC implementation consists of a successive approximation conversion. Five of the eleven inputs are available externally (ADIN1..5), and the remaining six inputs are dedicated to die temperature measurement, main battery voltage, backup battery voltage, charger voltage, charger current monitoring and USB Vbus voltage. Three external inputs (ADIN1..3) are standard inputs. The two others (ADIN4..5) which are associated with current sources, are intended for battery temperature and battery type measurements.

ADC	Net Name	Pin No	I/O
ADCIN1	TEMP_SENSE (RF)	D5	I
ADCIN2	JACK_TYPE	B4	I
ADCIN3	BATTERY_ID	A4	I
ADCIN4	HW_REV_DET	C5	I
ADCIN5	10K P/D for For USB download	B5	I

<Table.5> ADC Channel Spec

3.4.5 Switch ON/OFF

GD330 Power State : Defined 4cases as follow

- Power-ON : mobile is powered by main battery or backup battery.
- Power-OFF : mobile isn't any battery.
- Switch-ON : mobile is powered and waken up from switch-off state.
- Switch-OFF : mobile is powered to maintain only the permanent function(ULPD).

To enter into Switch-ON state, one of following 4 condition is satisfied.

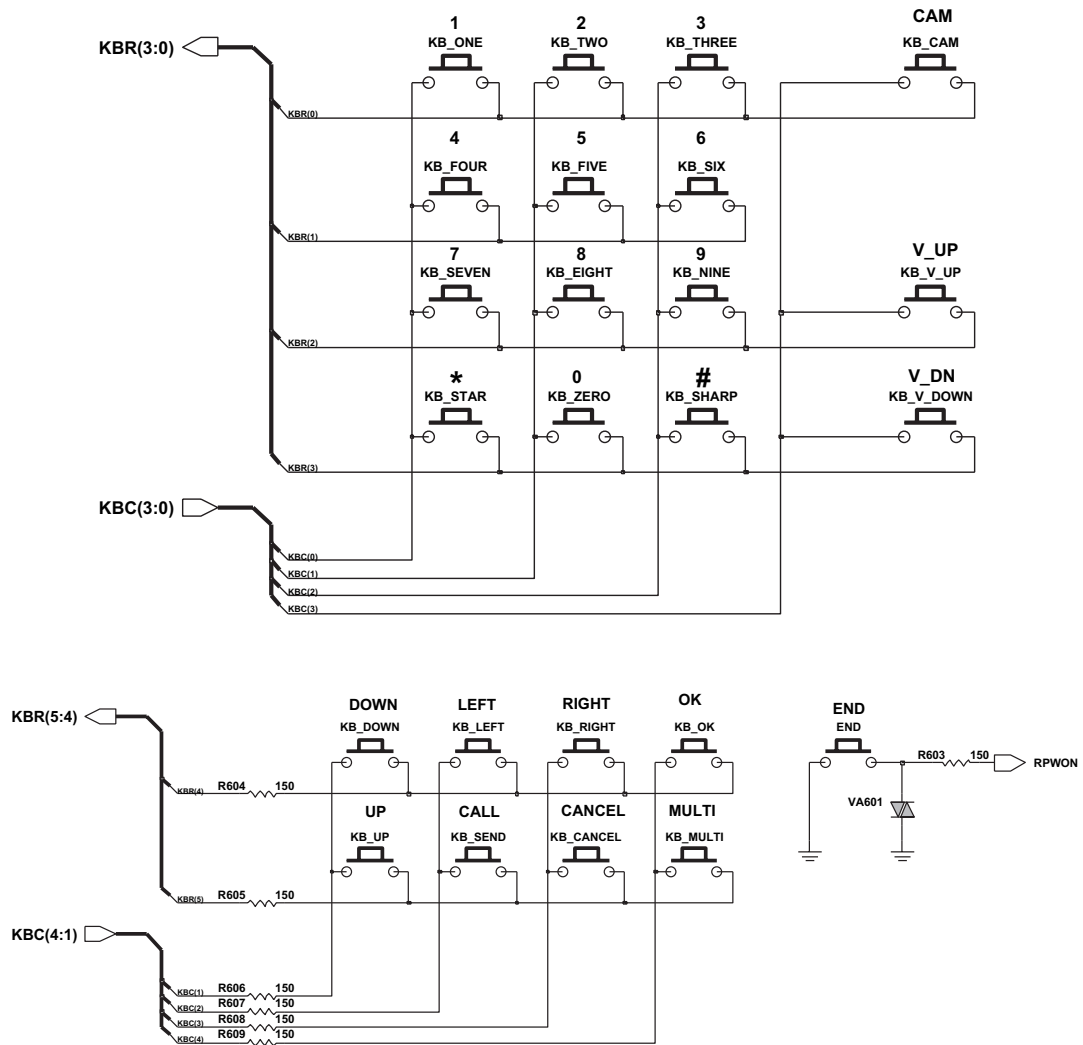
- **PWR-ON** pushed after a debouncing time of 30ms.
- **ON_REMOTE** : After debouncing, when a falling edge is detected on RPWON pin.
- **IT_WAKE_UP** : When a rising edge is detected on RTC_ALARM pin.
- **CHARGER_IC** : When a charger voltage is above VBAT+0.4V on VCHG.

3.4.6 Memories

- 1G Mbit NAND Flash + 512Mbit SD RAM

3. TECHNICAL BRIEF

3.4.7 Keypad Map description

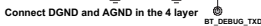


<Fig.13> Keypad schematic

3.4.8 System Connector

IO	Net Name	Comment
1	FM_ANT	FM signal Antenna
2	HOOK_BTN	Headset Hook Button
3	JACK_TYPE	Jack type detect
4	MMI_HSO_L	Headset Receiver Left
5	MMI_HSO_R	Headset Receiver Right
6	USB_DP	USB Data P
7	USB_DM	USB Data M
8	JACK_DETECT	Jack Detect Signal
9	VBAT	Battery Power
10	VBAT	Battery Power
11	RPWON_EXT	External Power On
12	VCHG_OVP	Charger Power Input
13	VCHG_OVP	Charger Power Input
14	UART_DSR	Test UART Port DSR
15	VBUS_OVP	USB Power In
16	UART_TXD	Test UART Port Transmitter
17	UART_RXD	Test UART Port Receiver
18	GND	Ground

3.5.1 Bluetooth Circuit on the Sub-Board



<Fig.14> BT schematic

3.5.2 Pin Description

Pin	Description
CLOCKS/GLOBAL SIGNALS	
SLOW-CLK_IN	32.768.kHz clock input
XTALM	Negative fast crystal in
XTALP/FAST_CLK_IN	Positive fast crystal in/fast clock input
RADIO FREQUENCY INTERFACE	
RFP	Receiver/transmit differential RF I/O
RFM	Receiver/transmit differential RF/IO
POWER MANAGEMENT	
VLDC_OUT	Very-low drop-output voltage
KA_OUT	Keep alive output
NSHUT_DOWN	Devices shutdown input(active low) also acts as power-on reset
POWER SUPPLY	
VBAT	Battery power supply
VDD_IO1	Power supply for I/O
BB_LDO_OUT1	Baseband LDO output
ANA_LDO_OUT	Analog LDO output
RFIO_LDO_OUT	RFIO LDO output, power source for RF elements
OSC_LDO_OUT	OSC LDO output
VDD_IN_BB	Baseband LDO input voltage
BGAP_V	BGAP reference voltage
BGAP_I	BGAP reference current(used only for test)
GROUND	
VSS	Digital ground
VSSA	Analog ground/RF analog ground
I/O NAME	
AUD_CLK	Input-when external codec is configured as master(default configuration)
AUD_FSYNC	
AUD_IN	
AUD_OUT	High Z with PD, except when transmitting voice samples
GPIO0	EXT_CLK_REQ_OUT
GPIO1	EXT_CLK_REQ_IN
HCI UART INTERFACE	
HCI_RX	HCI UART data receive
HCI_TX	HCI UART data transmit

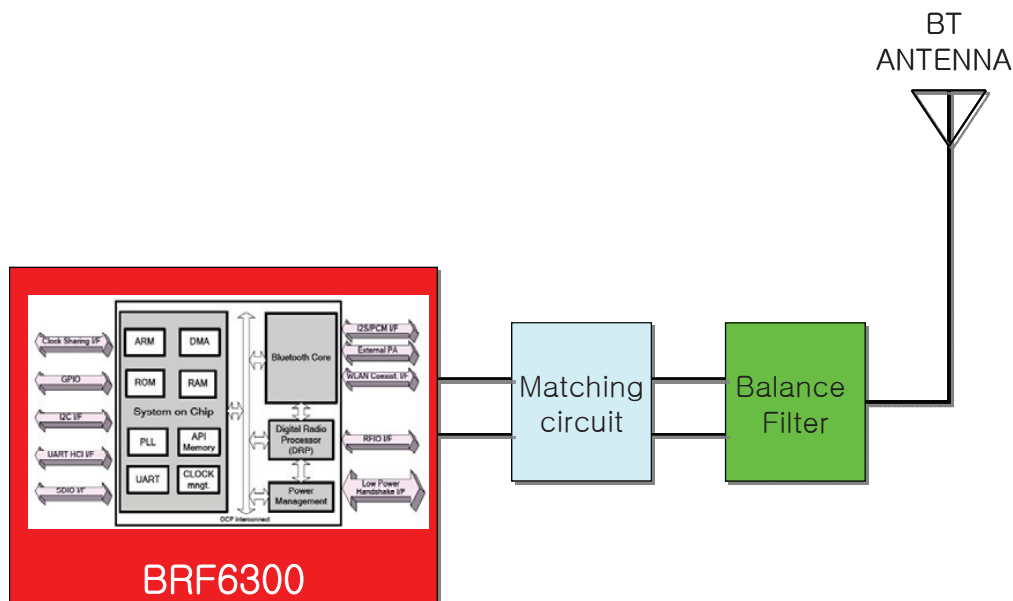
3. TECHNICAL BRIEF

3.5.3 Bluetooth circuit Description

- Single chip 90 nm CMOS Bluetooth ROM solution
- Bluetooth 1.1, 1.2 and 2.0 specification compliant - up to HCI level.
- Enhanced Data Rate (2&3 Mbps)
- Future support for Bluetooth 2005 core release (software upgrade when Bluetooth specification will be available)
- Enhanced host interfaces (UART, SDIO)
- Very low power consumption
- Pin-to-pin compatible with BRF6150
- On-chip Digital Radio Processor (DRP)
 - o Integrated 2.4 GHz RF transceiver
 - o All digital PLL transmitter with digitally controlled oscillator
 - o Near zero IF architecture
 - o On-chip TX/RX switch
 - o Support for Class 1 applications
- Embedded ARM7TDMI-E Microprocessor System On Chip
 - o High rate H4 UART HCI
 - o High rate HCI Three Wire UART Transport Layer (H5)
 - o SDIO transport layer
 - o Flexible PCM and I2S interfaces: full flexibility for data order, sampling and positioning
 - o Automatic clock detection mechanism
 - o Patch trap mechanism that enables feature changes in ROM (ROM updates, improvements)

- On-chip Power Management adapted to cellular application
 - o Direct connection to battery or external LDO 1.7 to 5.4V
 - o IO supply voltage - 1.62 – 1.89V
 - o Power saving mode
 - o Shut-Down mode to minimize power consumption when Bluetooth is not used
- Temperature detection and compensation mechanism ensures minimal variation in the RF performance over the whole temperature range
- Seamless integration with TI OMAP™ application processor and GSM-GPRS-UMTS chipset
- Enhanced support for WLAN Co-existence (bandwidth sharing, antenna sharing)
- Spurious emissions compatible with GPS applications
- 5 external capacitors and balun/matching network required - total PCB area required only 45 mm² (BGA package)
- Package: 4.5x4.5 mm size, 0.5 mm ball pitch, pb-free Micro Star Junior BGA package.
- Stacked RAM support with the same footprint as the ROM device (for development phase only)
- TI proprietary low power scan achieves paging and inquiry scans with fast RSSI algorithm, at 1/3rd normal power.

3.5.4 Bluetooth Block Diagram



<Fig.15> BT Block Diagram

4. TROUBLE SHOOTING

4. TROUBLE SHOOTING

► Trouble Test Set-up

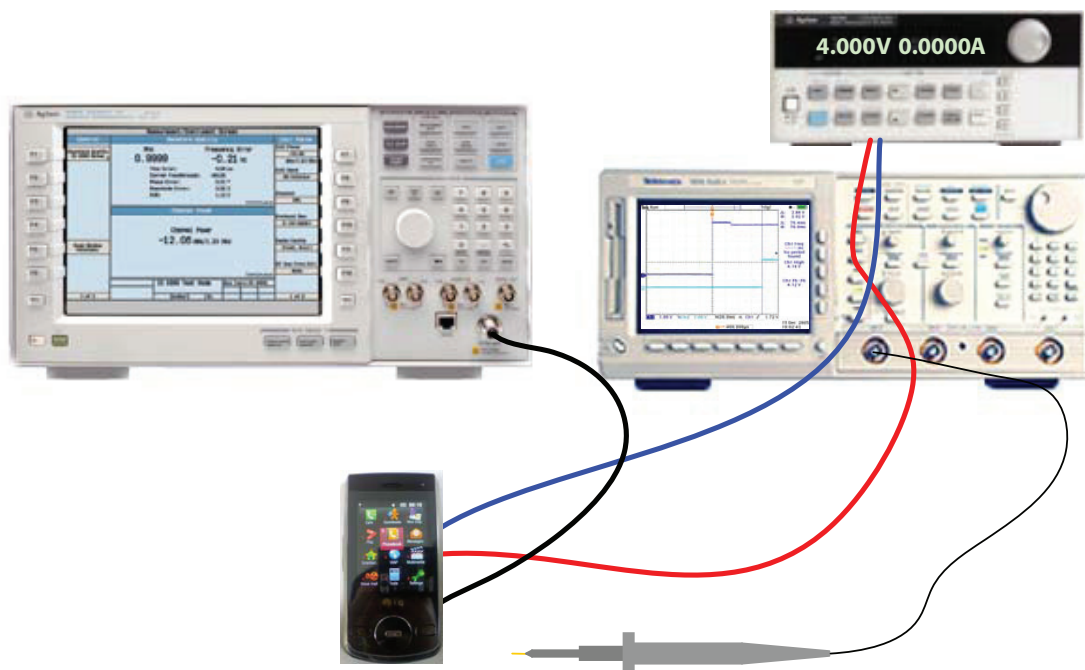


Fig.4-1 Test Set Up

Power on all of test equipment

- Connect PIF-UNION JIG or dummy battery to the DUT for power up.
- Connect mobile switch cable between Communication test set and DUT when you need to make a phone call.
- Follow trouble shooting procedure

4.1. RF Part Technical Brief

4.1.1 RF Part Component

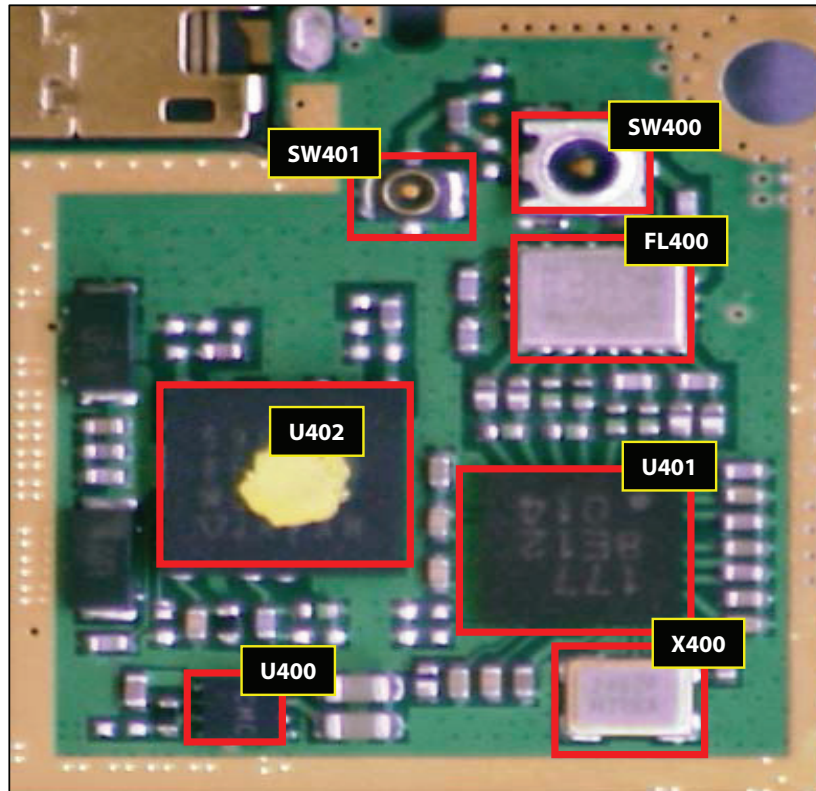


Fig4-2. RF components placement

Reference	Part Description
U400	Voltage Regulator
U401	Transceiver
U402	PAM (Power Amp. Module)
SW400	Mobile Switch 1
SW401	Mobile Switch 2
FL400	FEM(Front End Module)
X400	DCXO (26MHz)

4. TROUBLE SHOOTING

4.2. RF Part Trouble shooting

4.2.1 RF Receiving Path Trouble Shooting

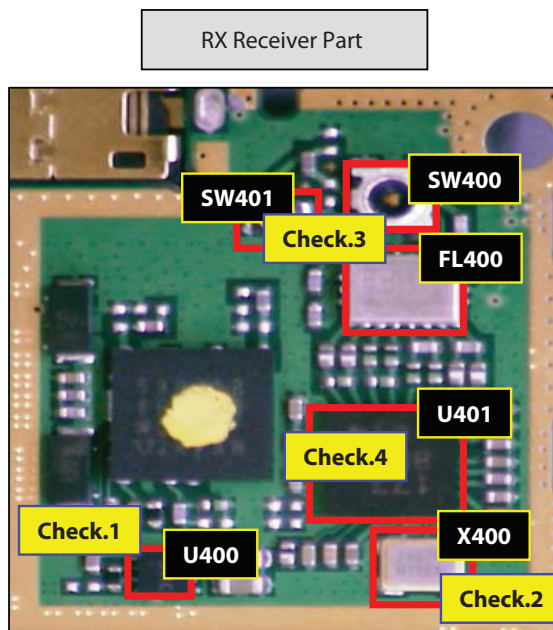
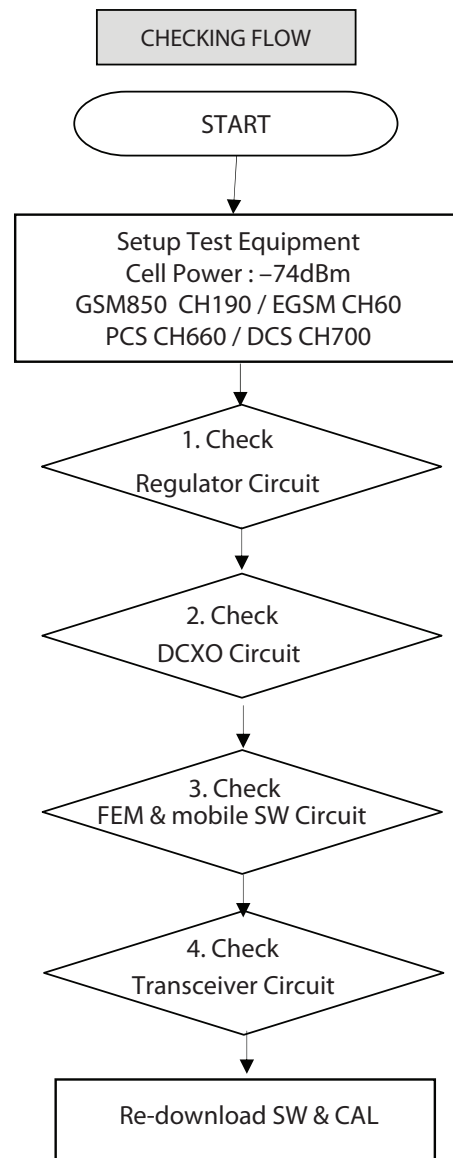


Fig4-3. RX components placement



4.2.1.1 Regulator Circuit

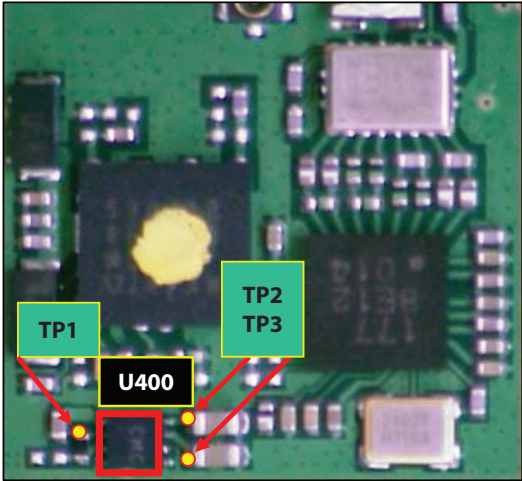


Fig4-4. Regulator placement

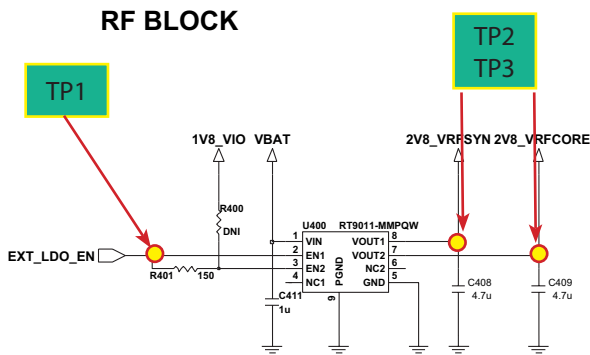


Fig4-5. Regulator schematic

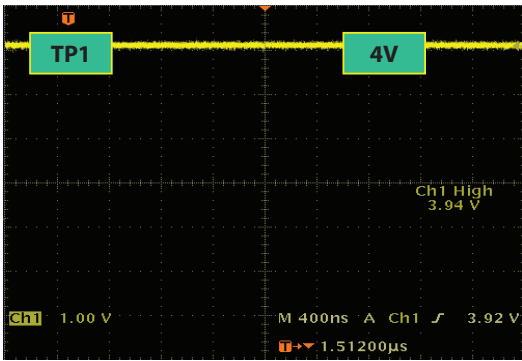
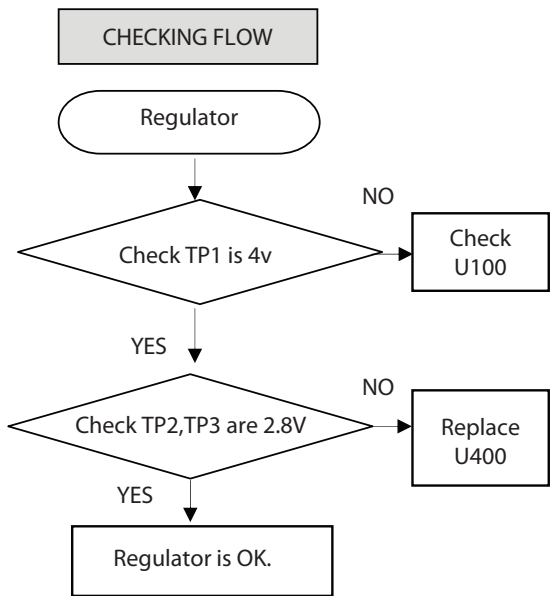


Fig4-6. Regulator Enable voltage

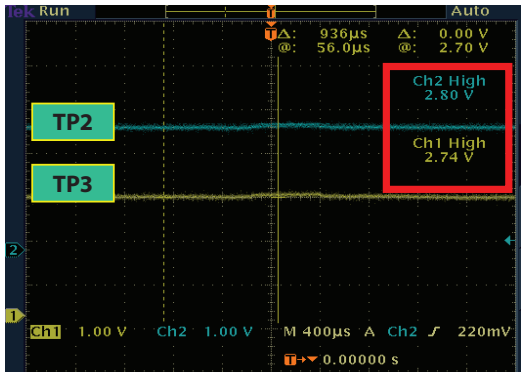


Fig4-7. Regulator output Voltage

4. TROUBLE SHOOTING

4.2.1.2 DCXO Circuit

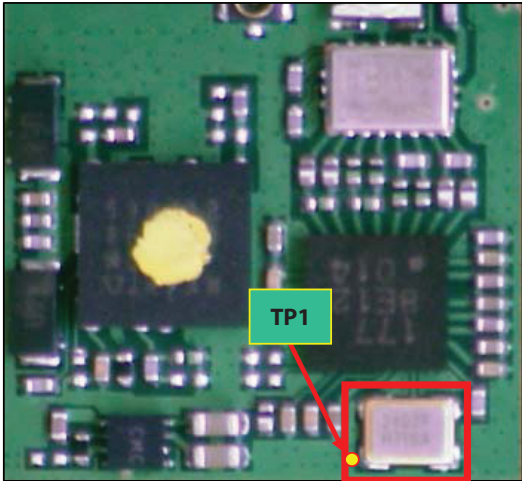


Fig4-8. DCXO placement

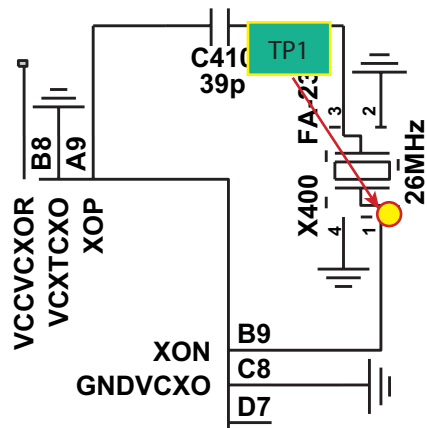


Fig4-9. DCXO schematic

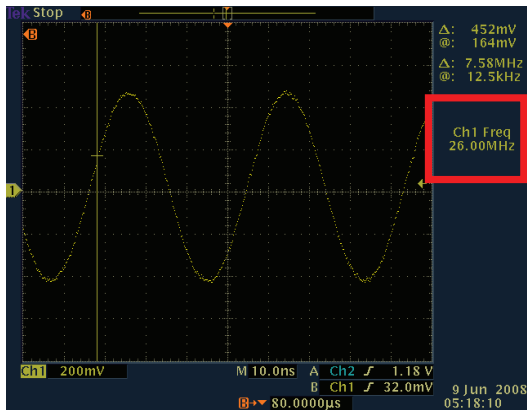
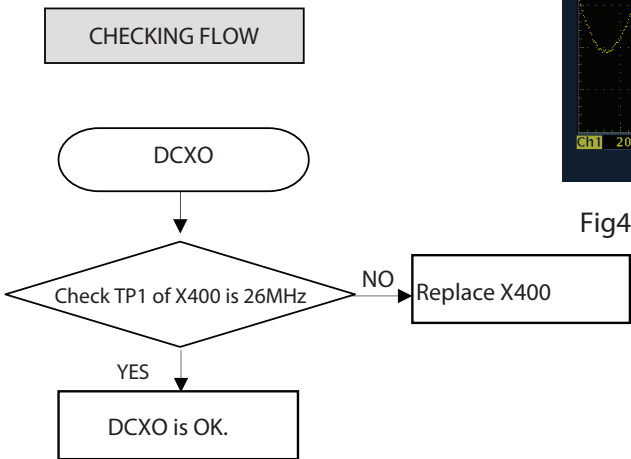


Fig4-10. DCXO Waveform and frequency



4.2.1.3 Mobile Switch & FEM Circuit

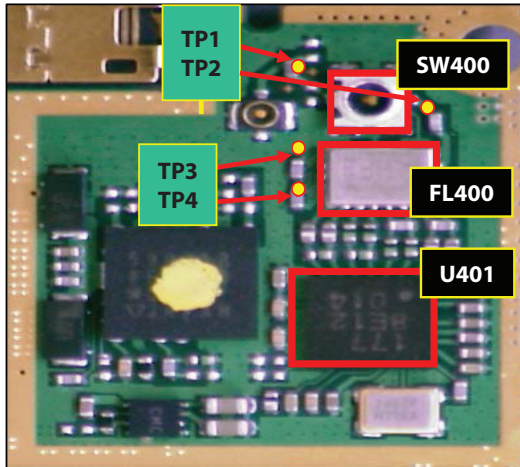


Fig4-11. SW & FEM placement

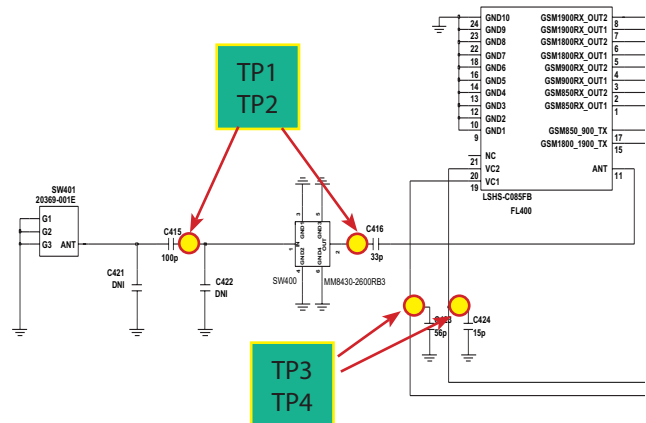
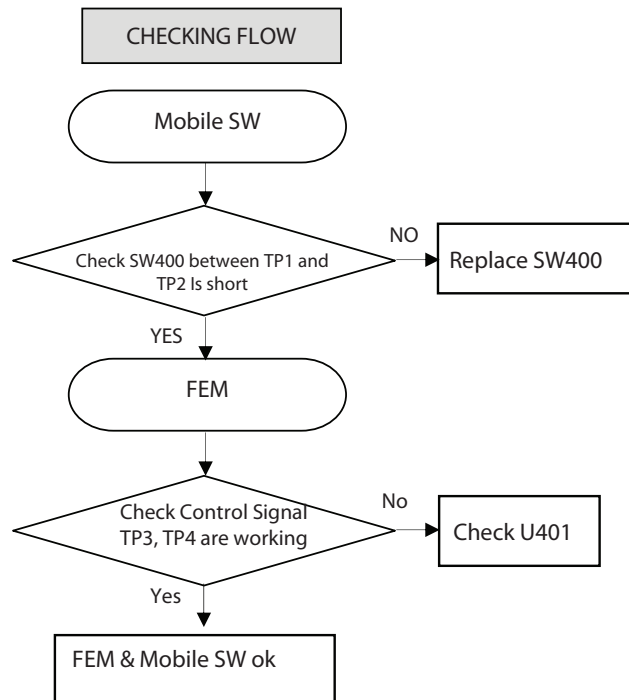


Fig4-12. SW & FEM schematic



4. TROUBLE SHOOTING

4.2.1.3 Mobile Switch & FEM Circuit

	VC1	VC2
850/900 RX	L	L
1800/1900 RX	L	L
850/900 TX	H	L
1800/1900 TX	L	H

Table4-1. FEM logic table

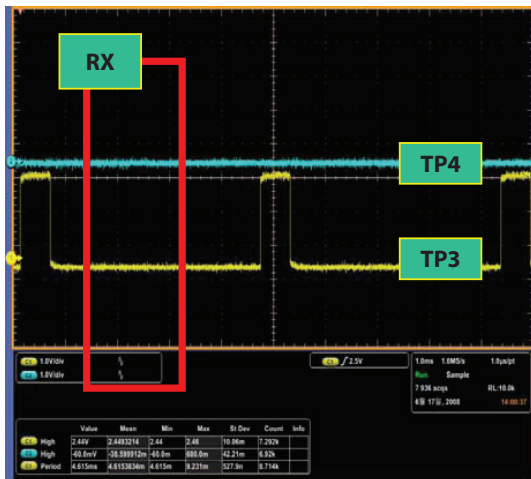


Fig4-13. Low band control signal

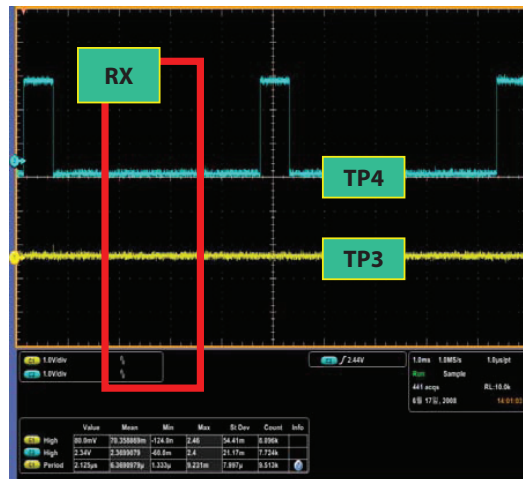


Fig4-14. High band control signal

4.2.1.4 Transceiver Circuit

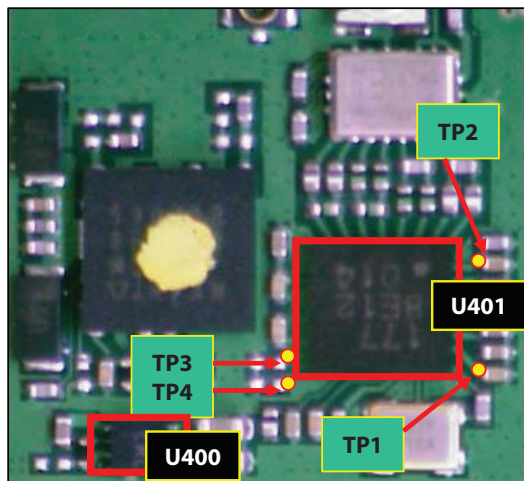


Fig4-15. Transceiver placement

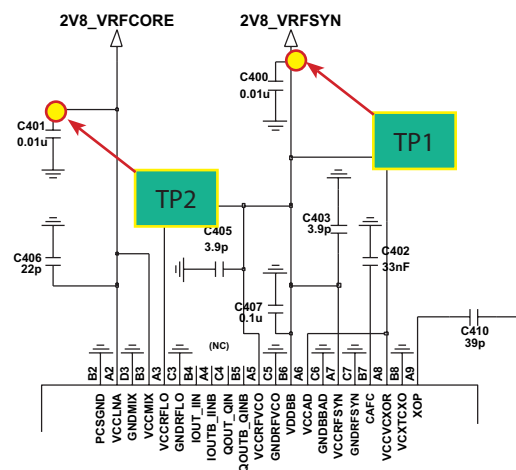


Fig4-16-1. Transceiver schematic

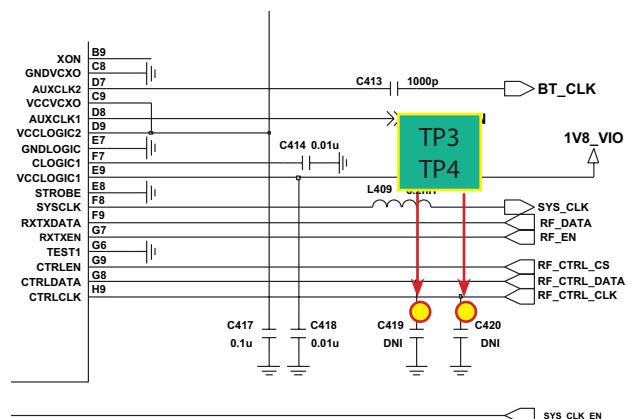
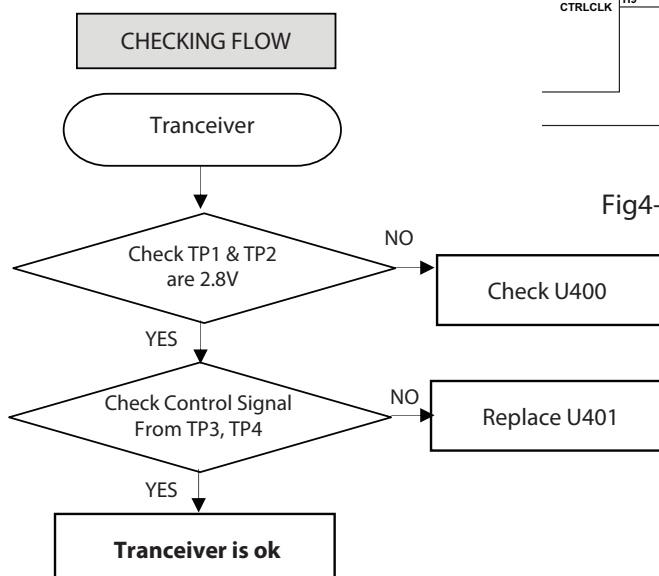


Fig4-16-2. Tranceiver schematic



4. TROUBLE SHOOTING

4.2.1.4 Transceiver Circuit

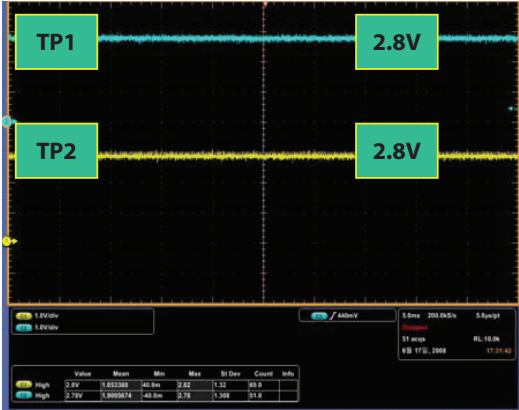


Fig4-17. RF control clock & data

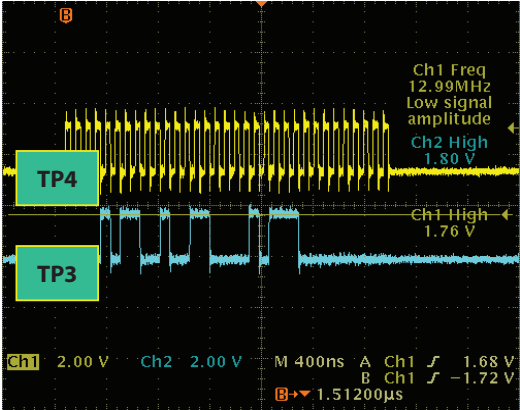


Fig4-18. RF control clock & data

4.2.2 RF Transmitting Path Trouble Shooting

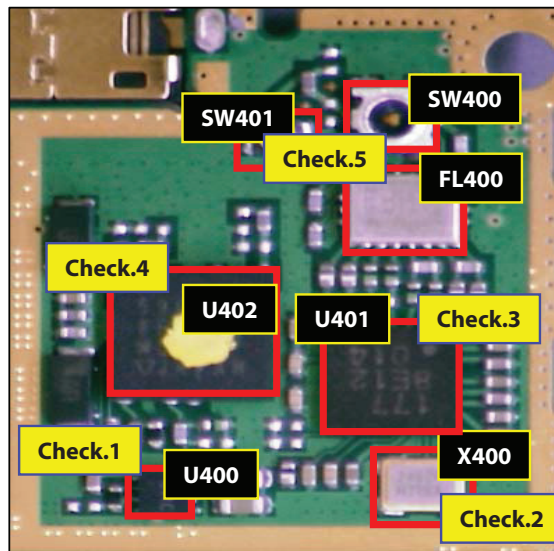
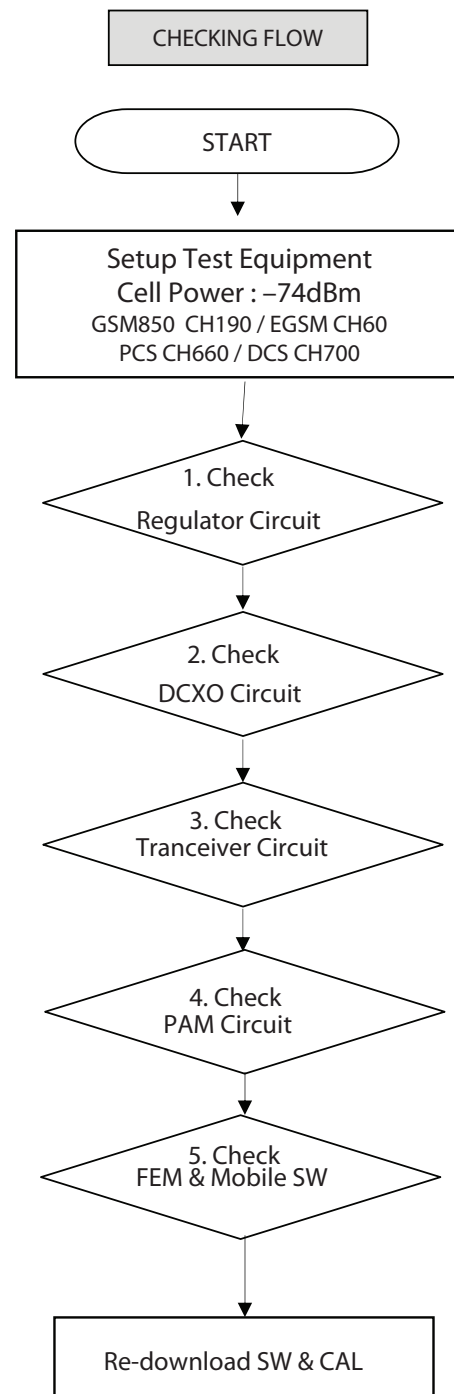


Fig4-19. TX components placement

Checking process of
Regulator & DCXO & Tranceiver
is same as Receiver part.



4. TROUBLE SHOOTING

4.2.2.1 PAM Circuit

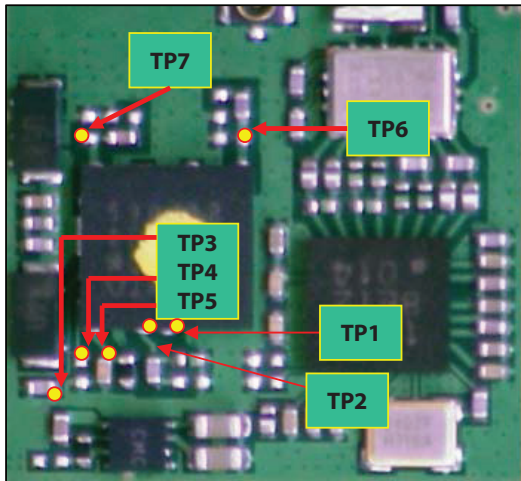


Fig4-20. PAM placement

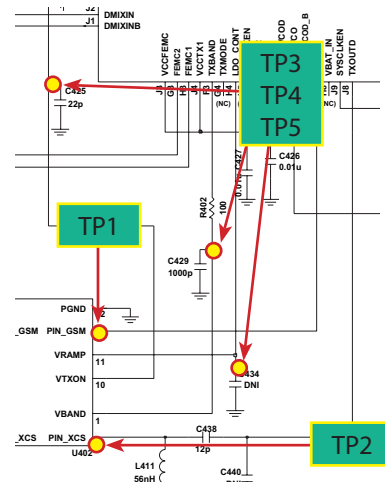


Fig4-21-1. PAM schematic

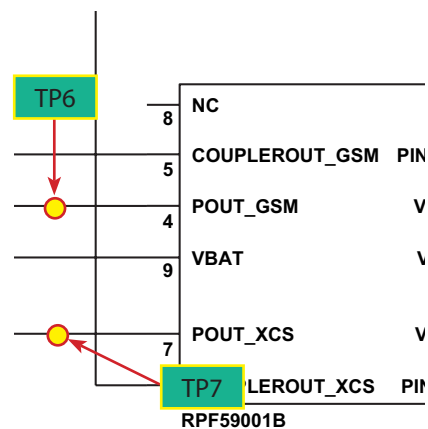
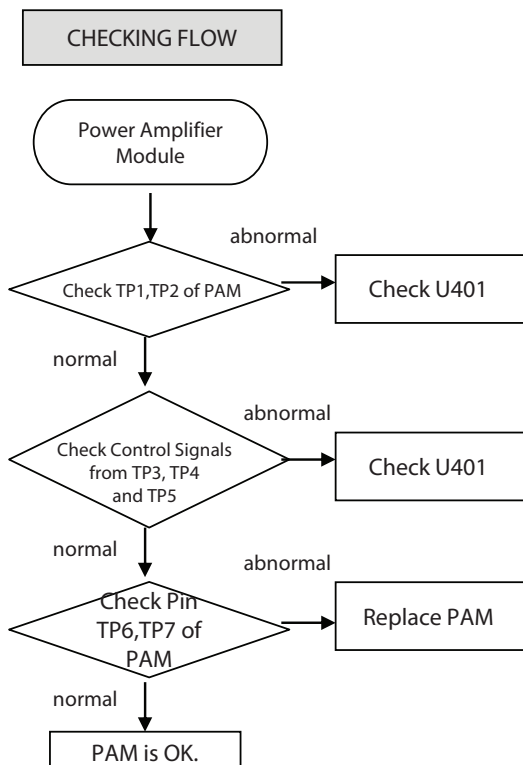


Fig4-21-2. PAM schematic

4.2.2.1 Mobile Switch & PAM & FEM Circuit

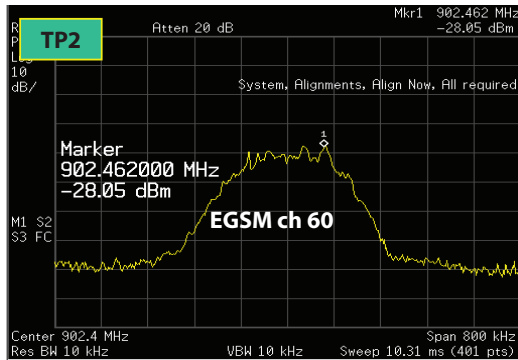


Fig4-22. Low band input signal

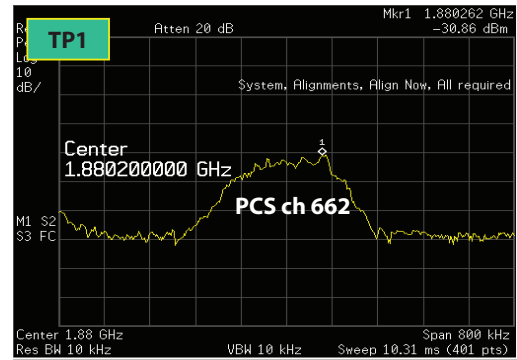


Fig4-23. Low band input signal



Fig4-24. Low band control signals



Fig4-25. High band control signals

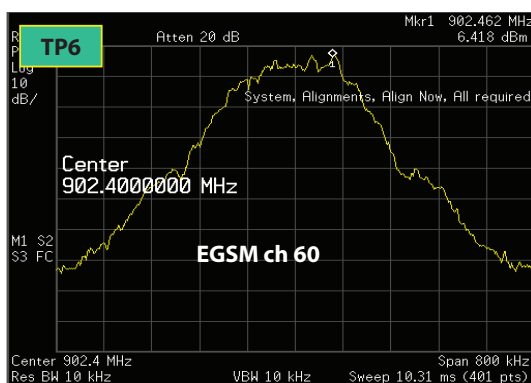


Fig4-26. Low band output signal

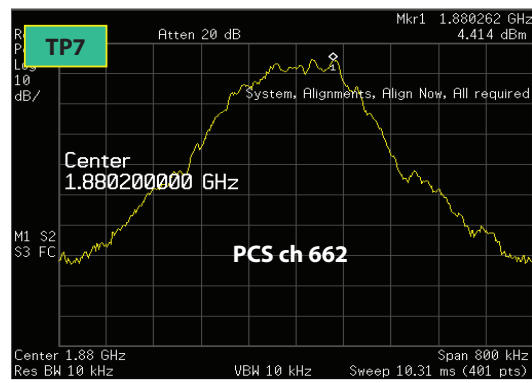


Fig4-27. High band output signal

4. TROUBLE SHOOTING

4.2.2.1 Mobile Switch & FEM Circuit

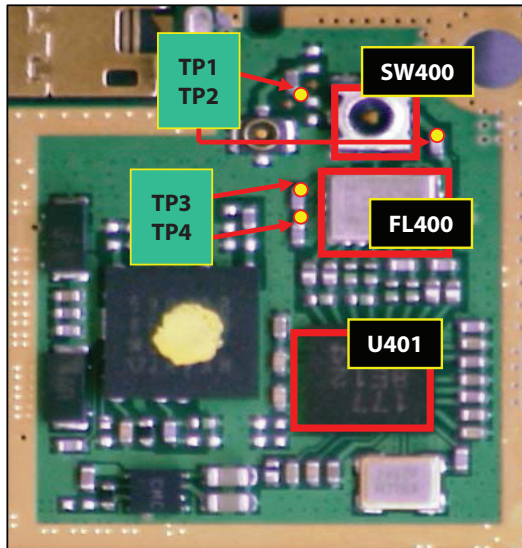


Fig4-28. SW & FEM placement

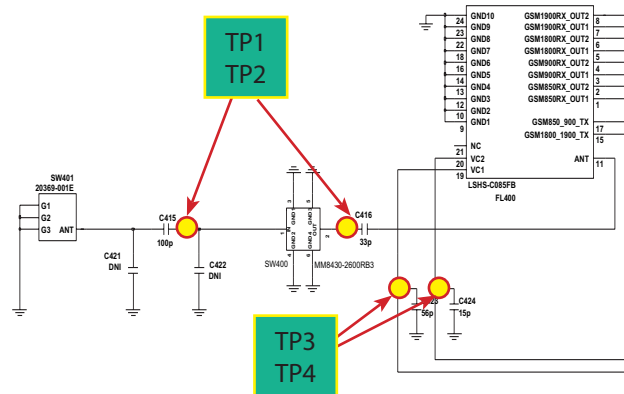
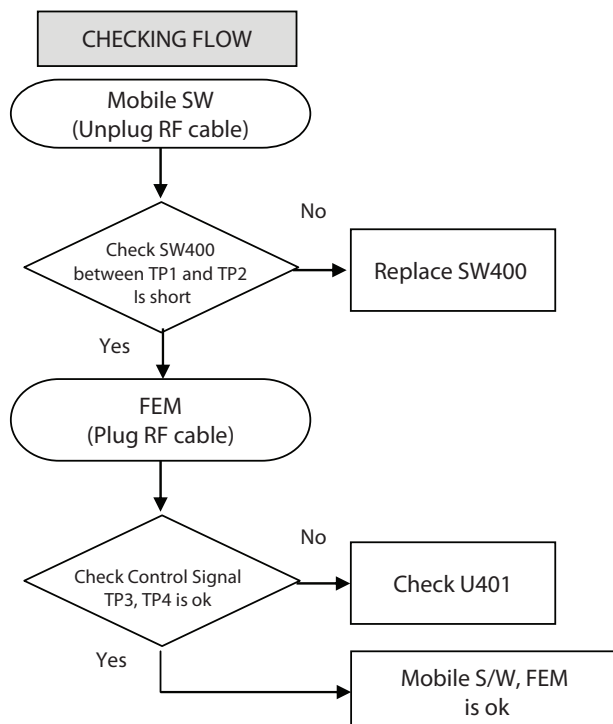


Fig4-29. SW & FEM schematic



4.2.2.1 Mobile Switch & FEM Circuit

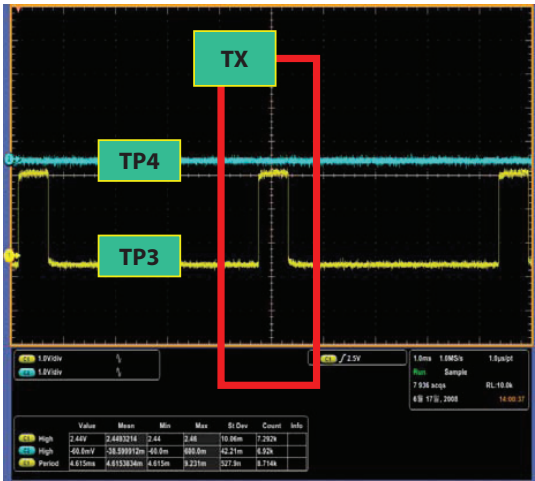


Fig4-30. Low band control signal

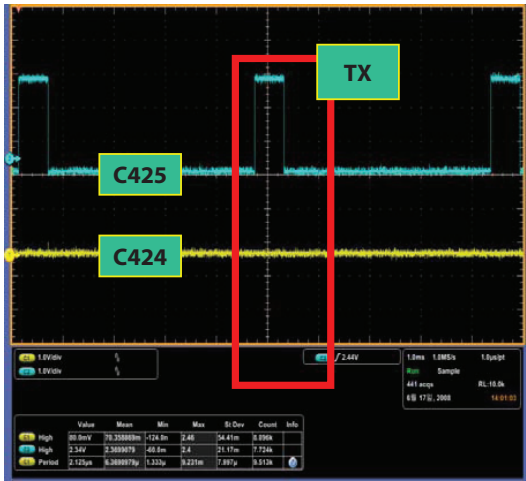


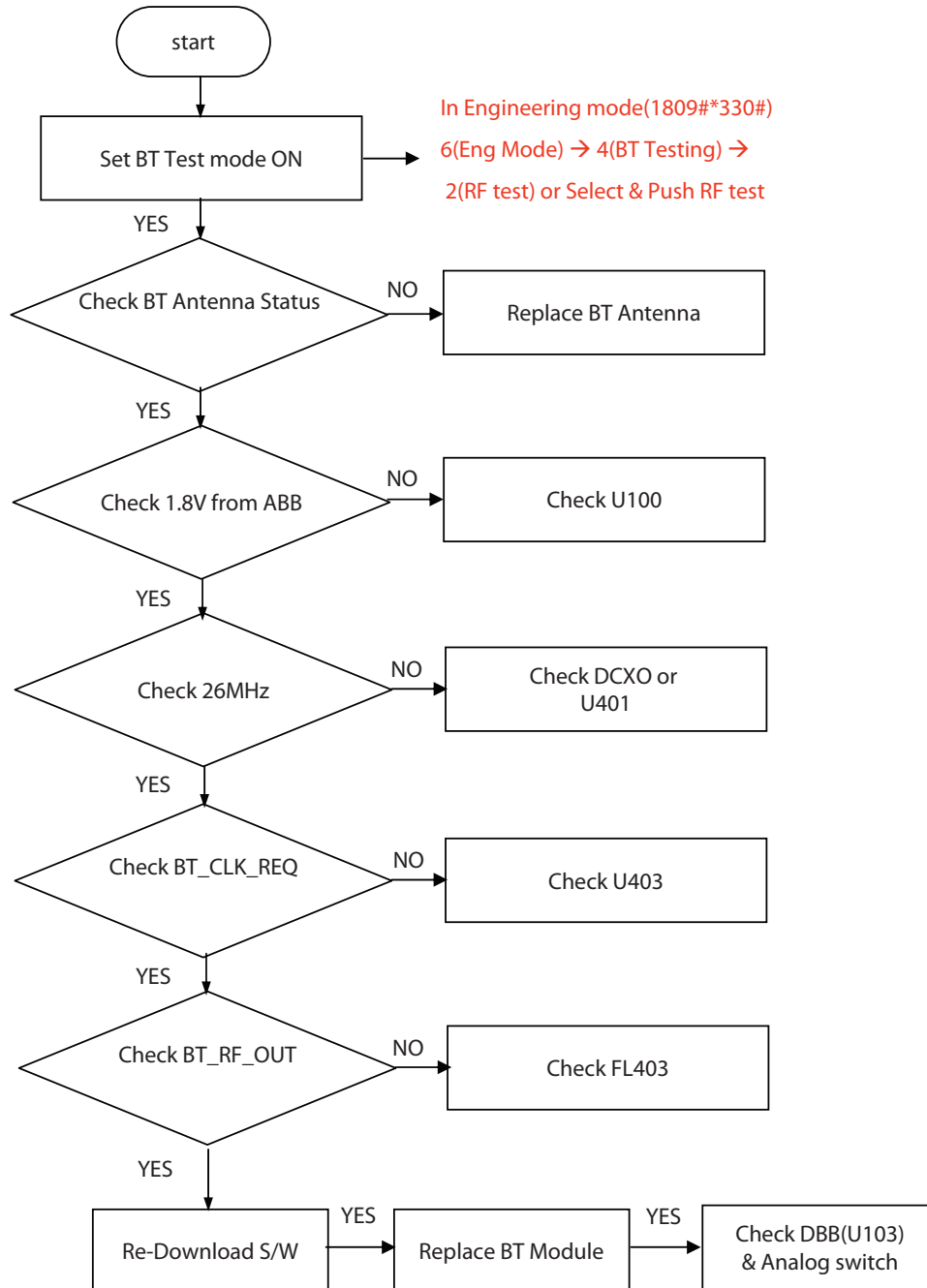
Fig4-31. High band control signal

	VC1	VC2
850/900 RX	L	L
1800/1900 RX	L	L
850/900 TX	H	L
1800/1900 TX	L	H

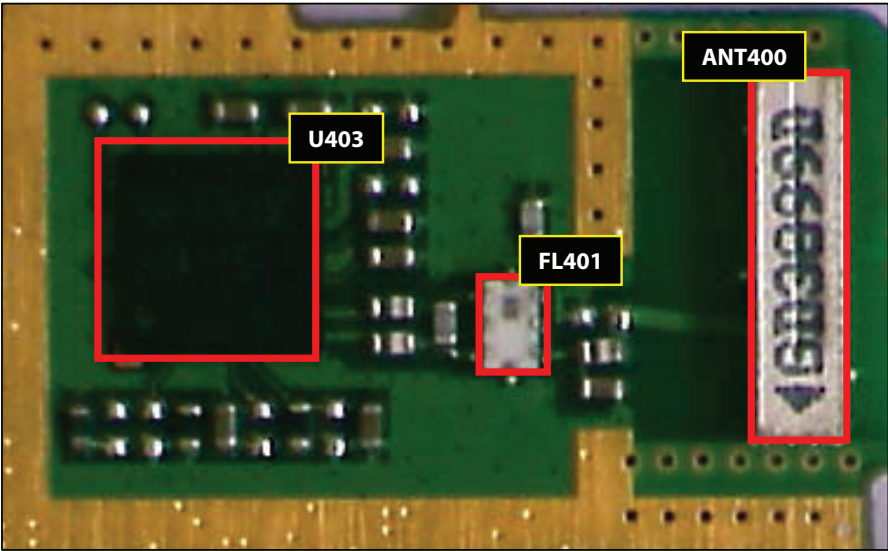
Table3-1. FEM logic table

4. TROUBLE SHOOTING

4.3. Bluetooth Trouble Shooting



4.3.1 BT part component

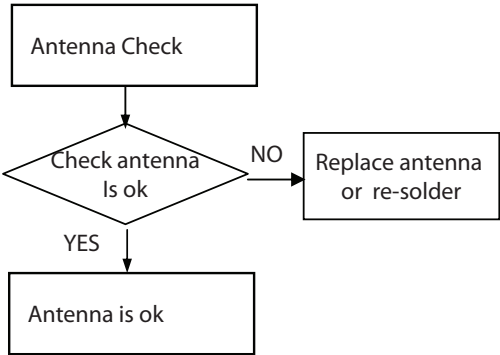
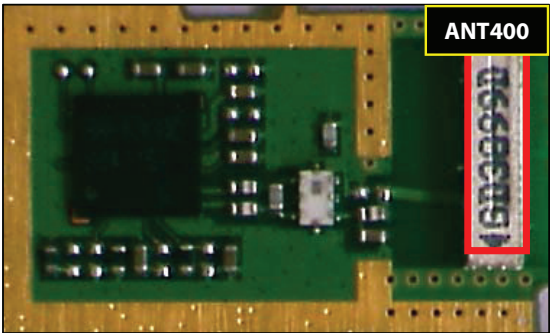


Reference	Part Description
U403	BRF6300
FL401	Band Pass Filter for Bluetooth, Balanced type
ANT400	Antenna for BT

Fig4-2. Bluetooth components placement

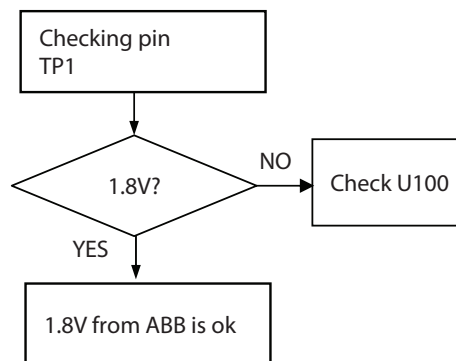
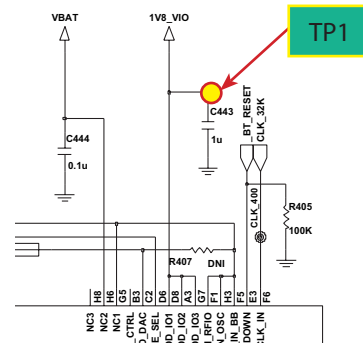
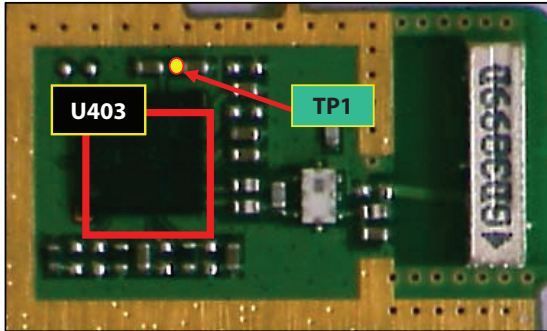
4.3.2. Bluetooth Trouble shooting

4.3.2.1 Antenna

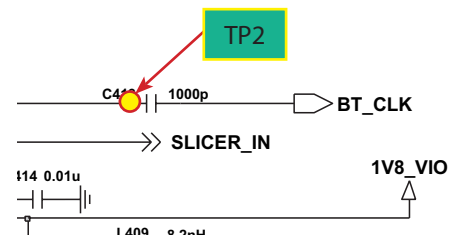
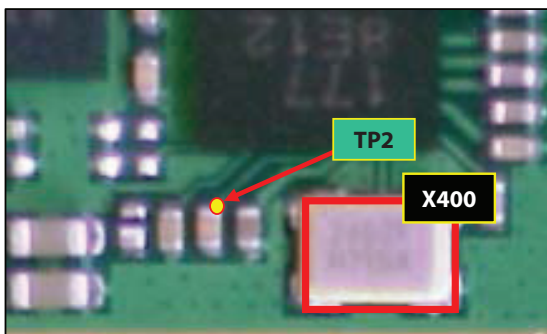


4. TROUBLE SHOOTING

4.3.2.2 Checking 1.8V from ABB

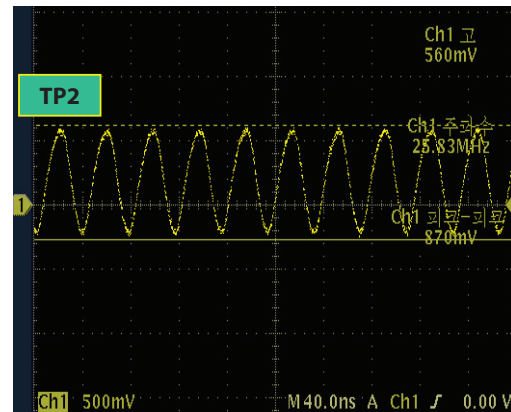
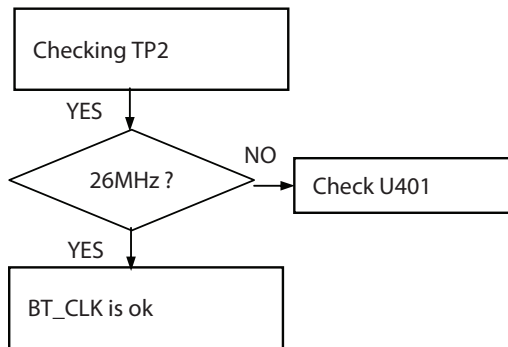


4.3.2.3 Checking BT_CLK

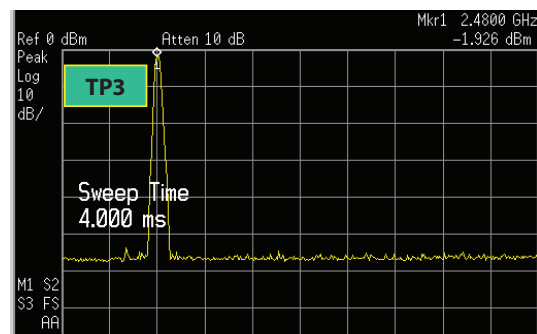
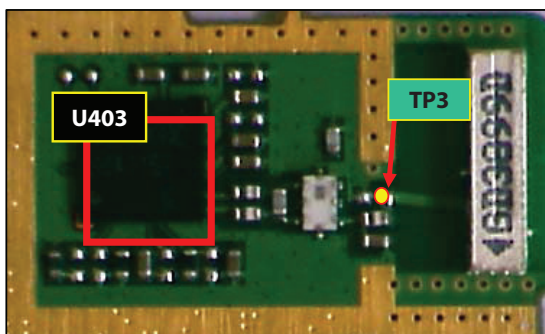
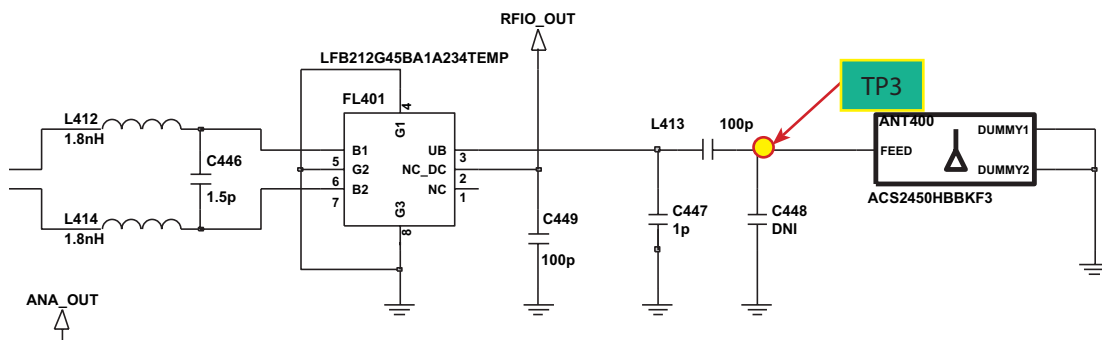


To check the BT_CLK, should check the C413 which is located nearby DCXO (X400)

4. TROUBLE SHOOTING



4.3.2.4 Checking BT RF OUT



4. TROUBLE SHOOTING

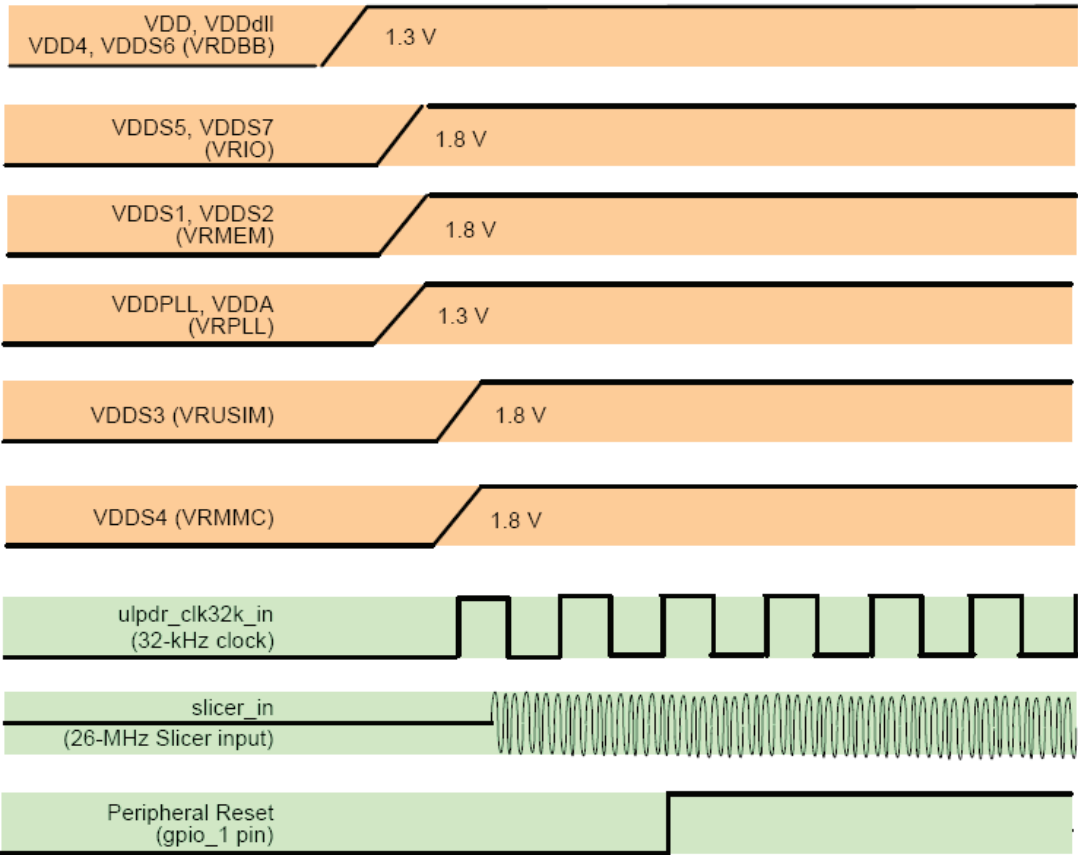
4.4. Baseband Part Troubleshooting

4.4.1 Power On Trouble

4.4.1.1 Power-On Trouble Troubleshooting

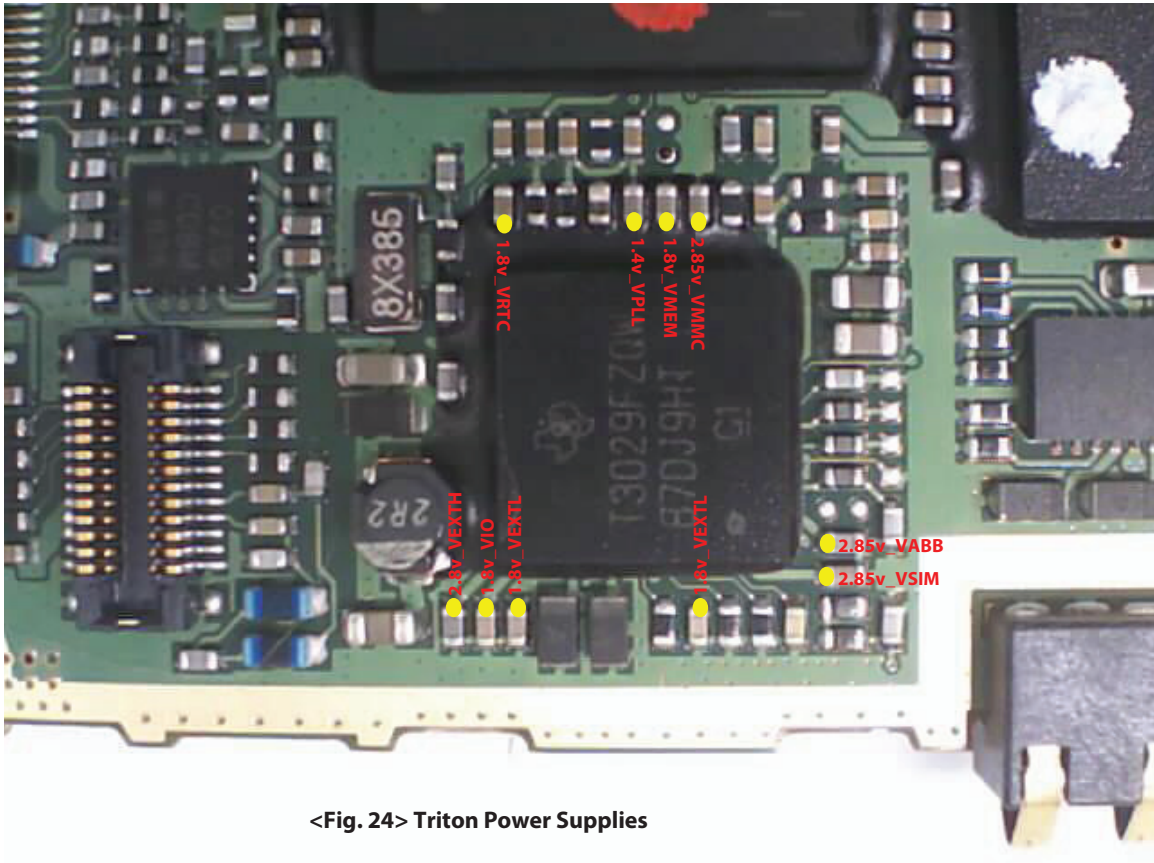
- Power-On Sequence
 - Connecting Battery
 - Power-On Key Detection
 - Pwon signal goes to ABB and then ABB resets DBB by ONNOFF signal
 - ONNOFF turns low(0v) to High (2.8V) and it resets DBB (Neptune)
 - All LDOs (internal LDOs of ABB and external LDOs) are turned on
- Check Points
 - Battery Voltage
 - Power-On Key Detection (Pwon signal)
 - Output of LDOs
- Trouble Shooting Setup
 - Connect PIF-UNION to the phone.
 - Set the TI-remote switch at PIF-UNION off.
- Trouble Shooting Procedure
 - Check Battery Voltage
 - END_KEY Dome Switch condition& Side FPCB condition
 - Check the output voltages of all LDOs.

* DBB Power-On Trouble Troubleshooting



4. TROUBLE SHOOTING

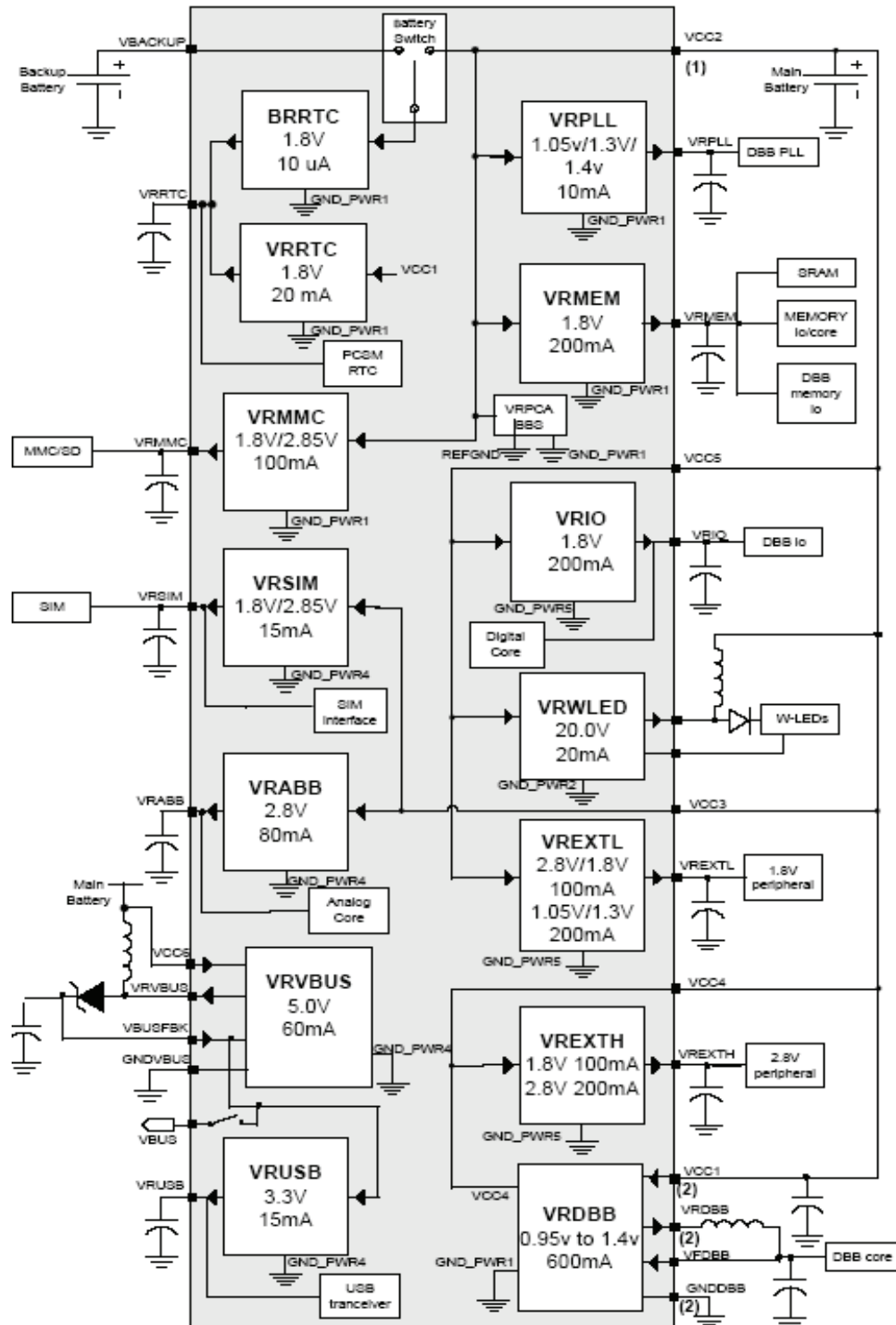
4.4.2 Check Point



<Fig. 24> Triton Power Supplies

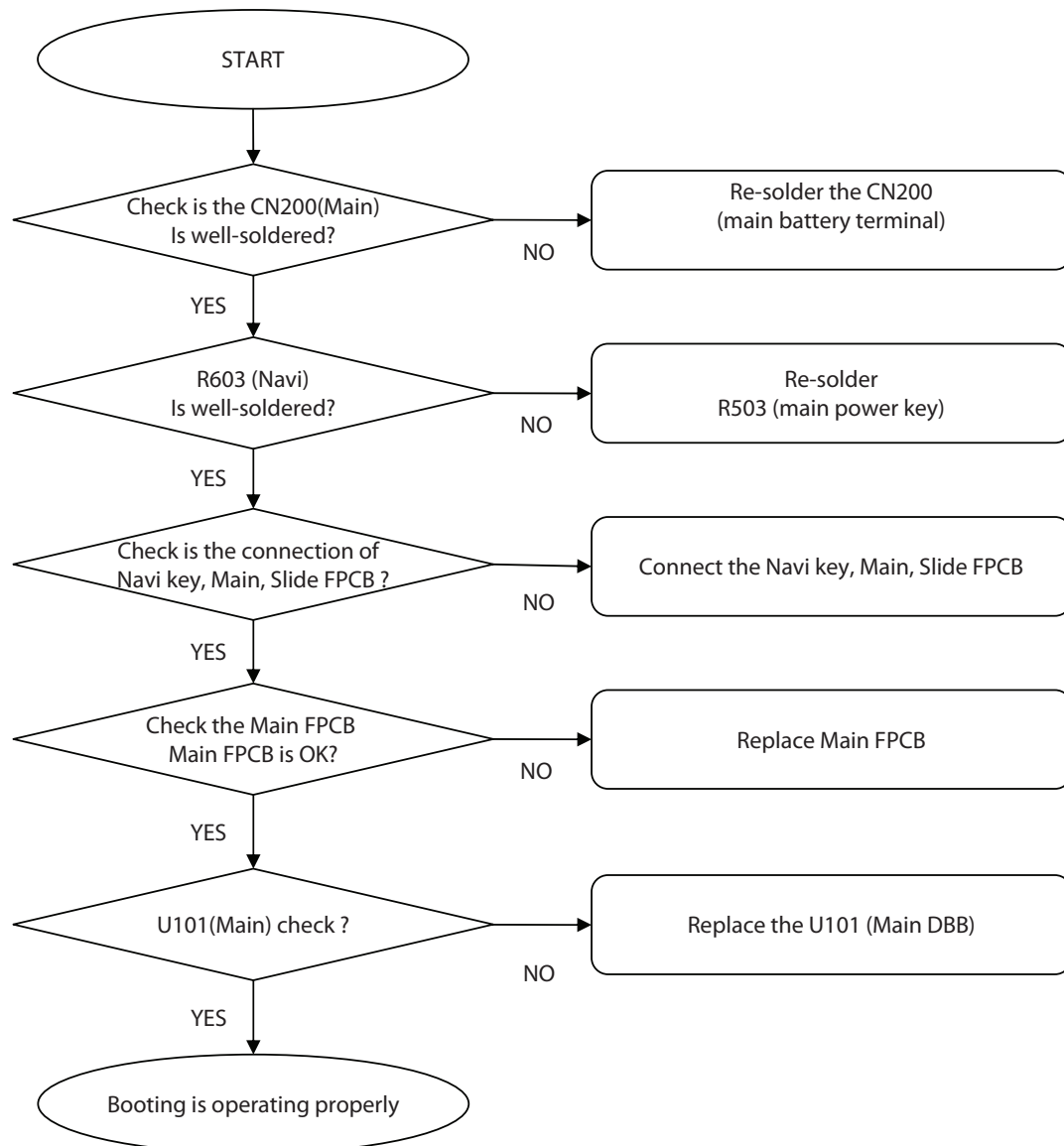
ABB Power Domain

Reference	Domain	Voltage(V)	Current(mA)
C124	VEXTL	1.8	100
C125	VEXTH	2.8	100
C126	VMMC	2.85	100
C127	VSIM	2.85	15
C128	VUSB	3.3	15
C129	VRTC	1.8	20
C130	VIO	1.8	200
C131	VABB	2.8	80
C132	VMEM	1.8	200
C133	VPLL	1.4	10



<Fig. 25> Triton Power Supplies

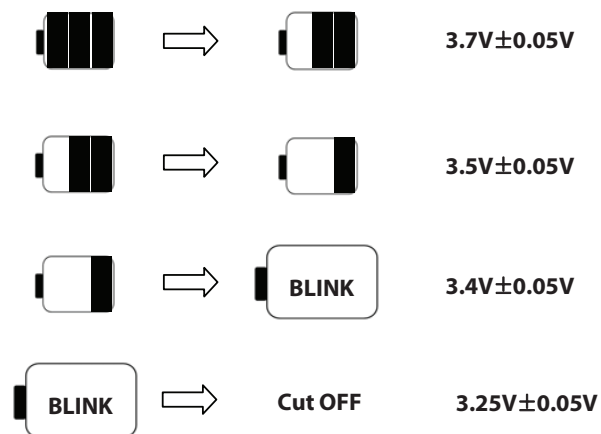
4. TROUBLE SHOOTING



4.4.3. Charging Trouble Shooting

- Charging method : CC-CV
- Charger Detection Voltage : About 4.0V
- Charging Time : About 3H under
- Charging Current : About 400mA
- Cut-off Current : 90mA
- Low Battery Alarm
 - Talk mode : 3.4V
 - Standby mode : 3.4V
- Switch-Off Voltage : 3.25
- Charging Temperature ADC Range
 - ~ -10℃ : Not charging operation
 - -10℃ ~ 50℃ : Charging
 - 50℃ ~ : Not charging operation

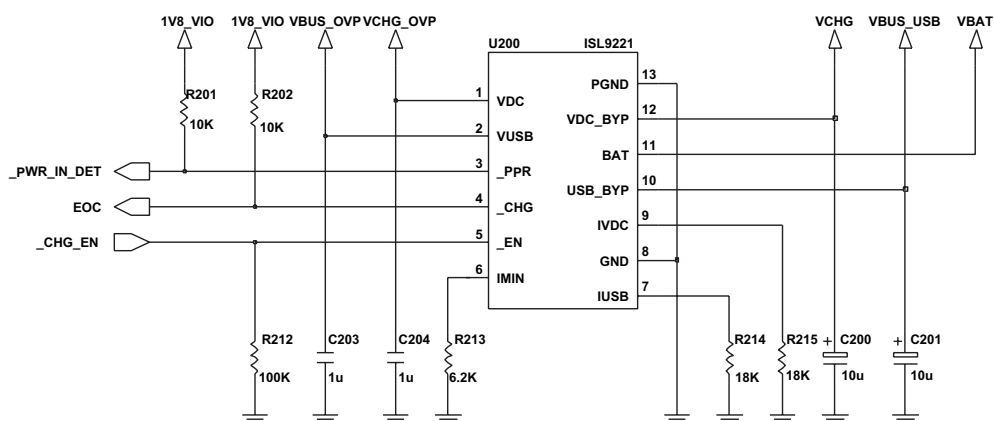
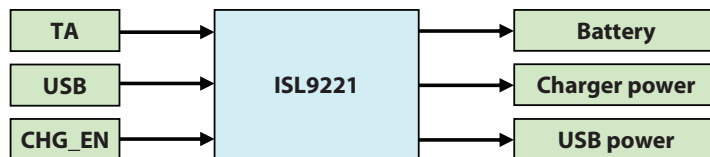
Battery ICON



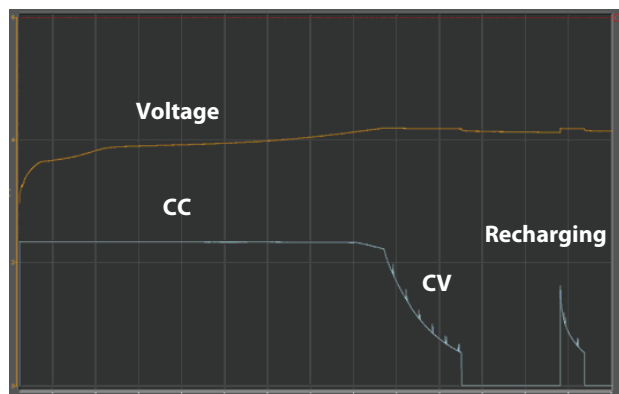
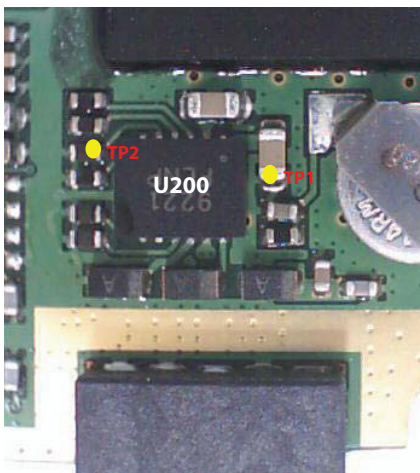
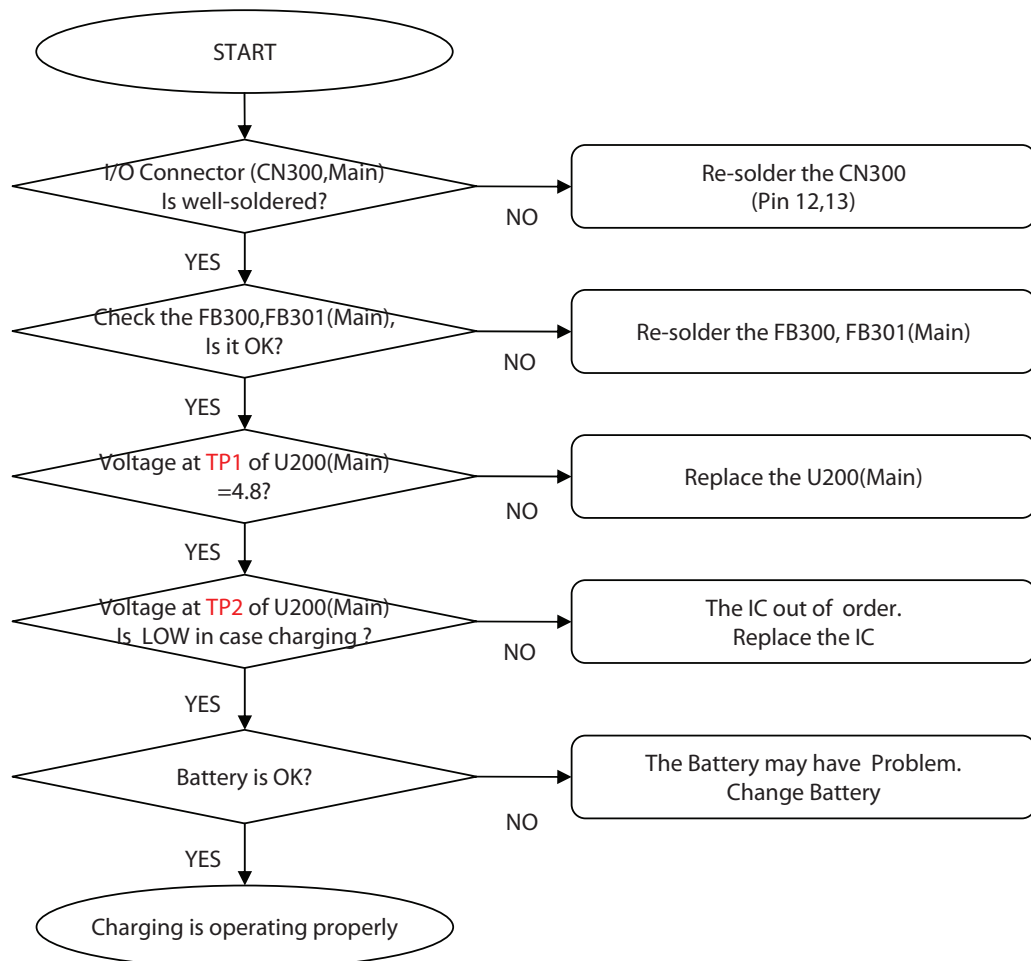
4. TROUBLE SHOOTING

4.4.4 Charging Current

- Charging Procedure
 - Connecting TA & Charger Detection
 - Control the charging Current by CHARGER IC
 - Charging Current flow into the Battery
- Check Points
 - Connection of TA
 - Charger IC
 - Battery
- Trouble Shooting Setup
 - Connect Battery & TA to the handset
- Trouble Shooting Procedure
 - Check the charger connector
 - Check the charging current path
 - Check the battery



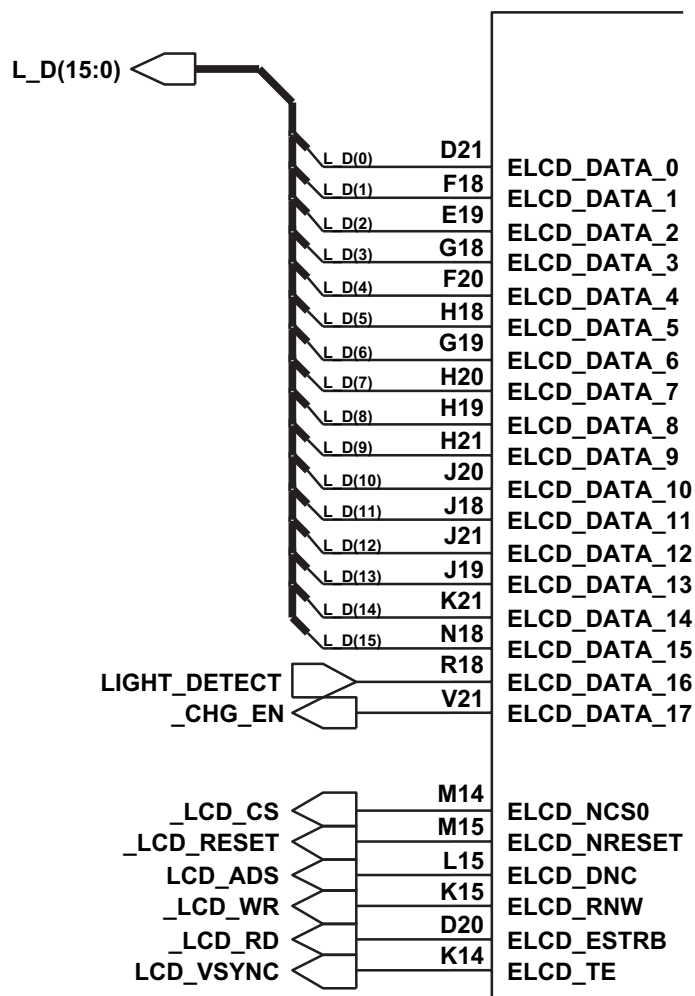
4. TROUBLE SHOOTING



4. TROUBLE SHOOTING

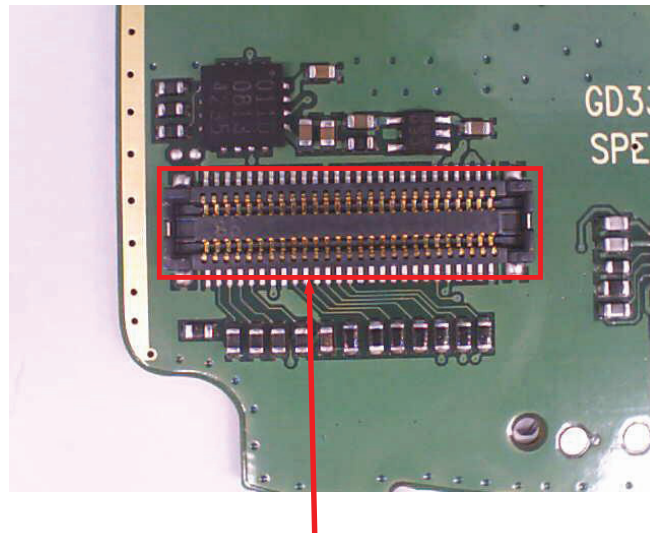
4.5. LCD Display Trouble shooting

- LCD Control signals from Main Board
 - The signal of DBB is ELCD_DATA(16BIT), LCD_CS/WR/AD
 - LCD MODULE POWER SOURCE and LCD reset.

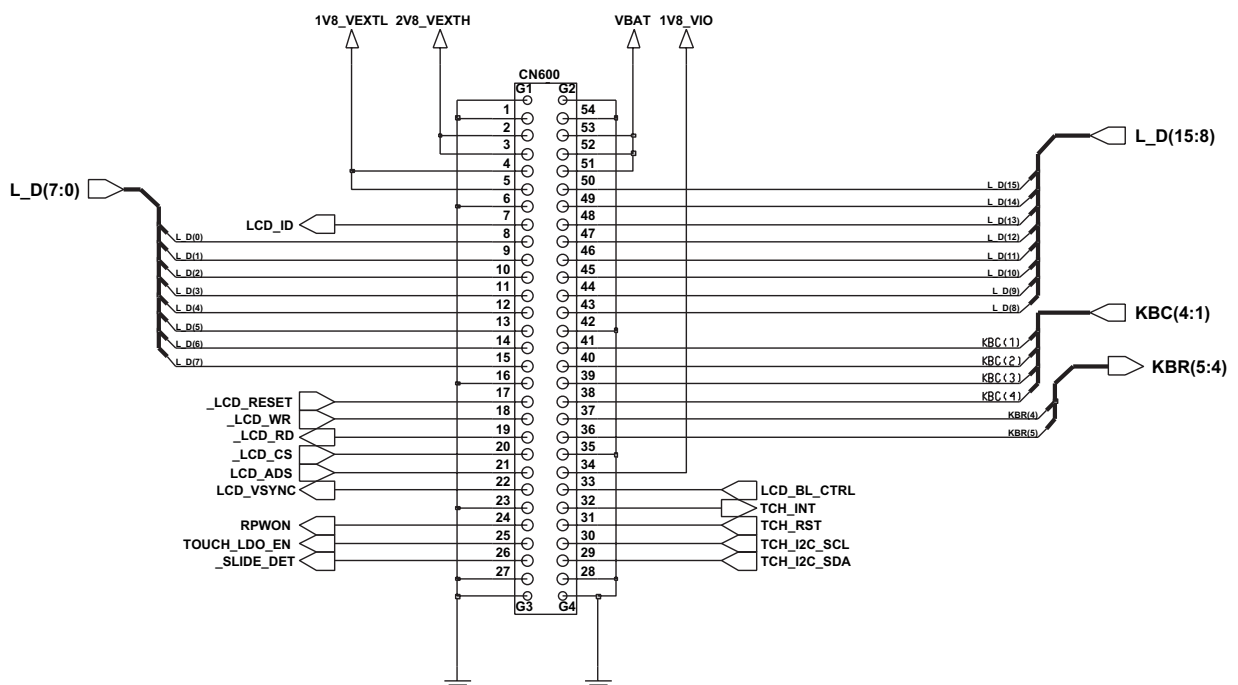


- Check Point
 - The Assembly status of the LCD Module
 - The Soldering of connector
 - The FPCB which connects the LCD Module
- Trouble Shooting Setup
 - Connect PIF Jig, and Power on

4.5.1 Check Point #1 – Navi PCB Connector 1

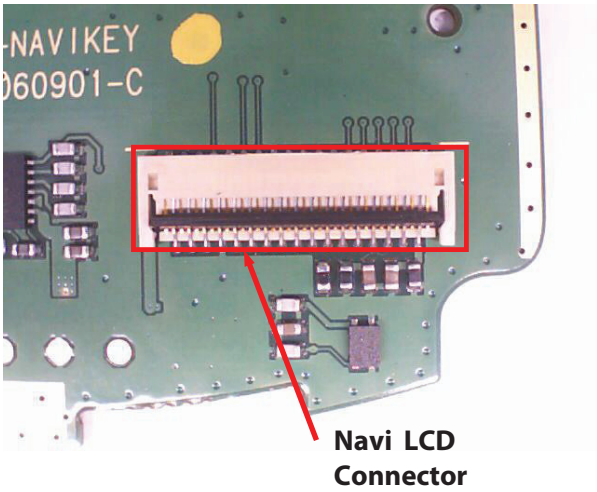


Slide FPCB Connector <CN600>

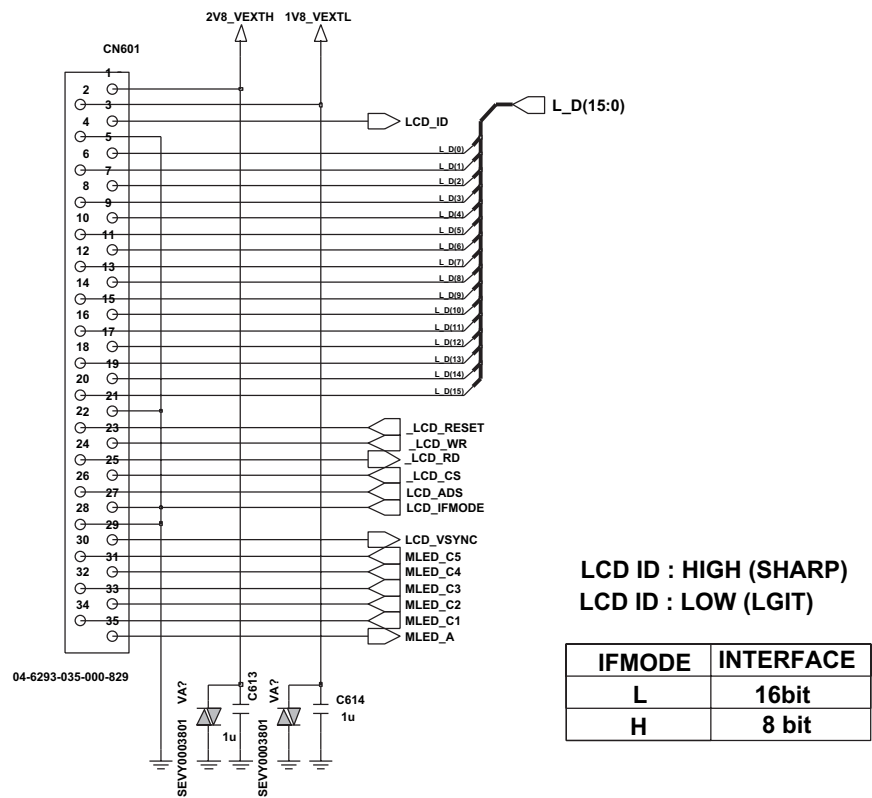


4. TROUBLE SHOOTING

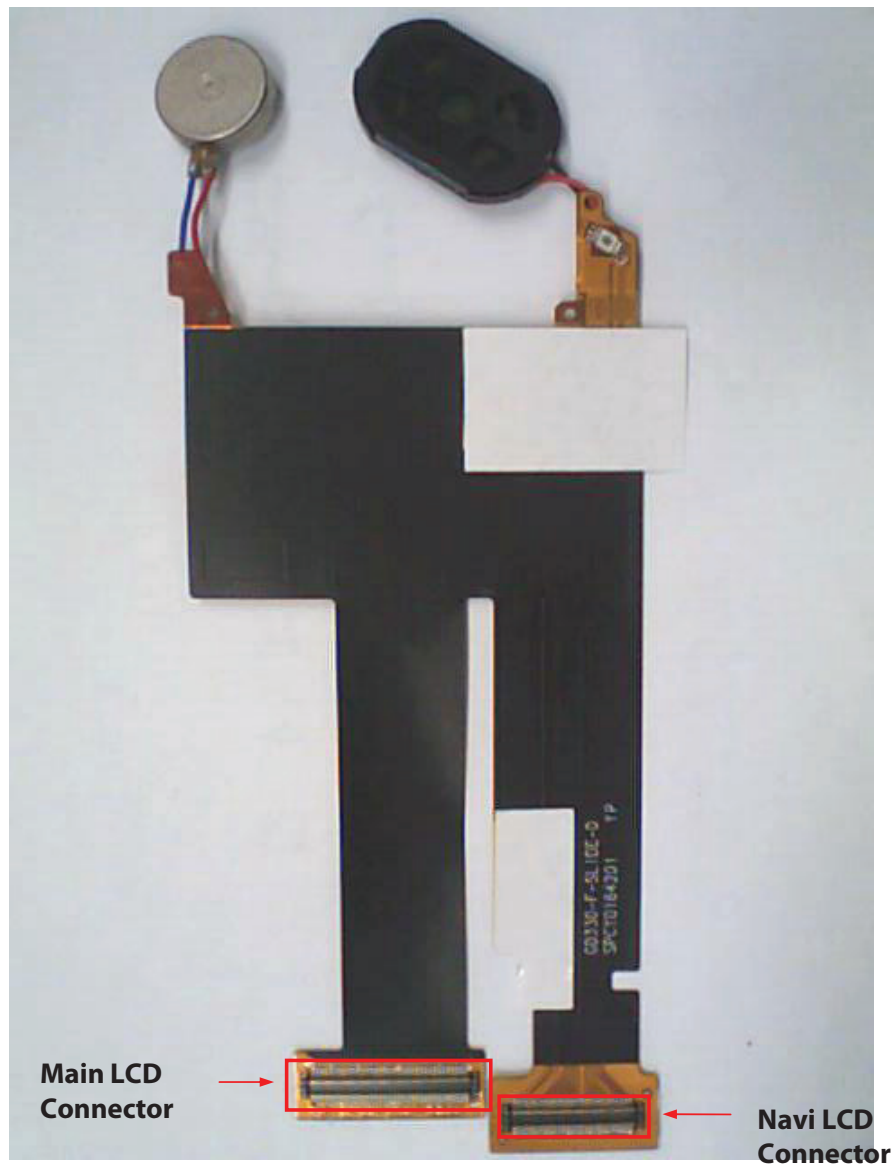
4.5.2 Check Point #2 – Navi PCB Connector 2



LCD CONNECTOR

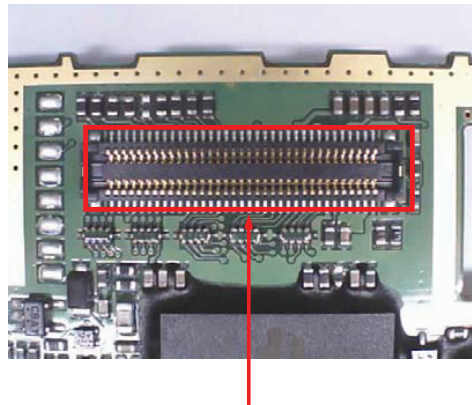


4.5.3 Check Point #3 – FPCB Connector

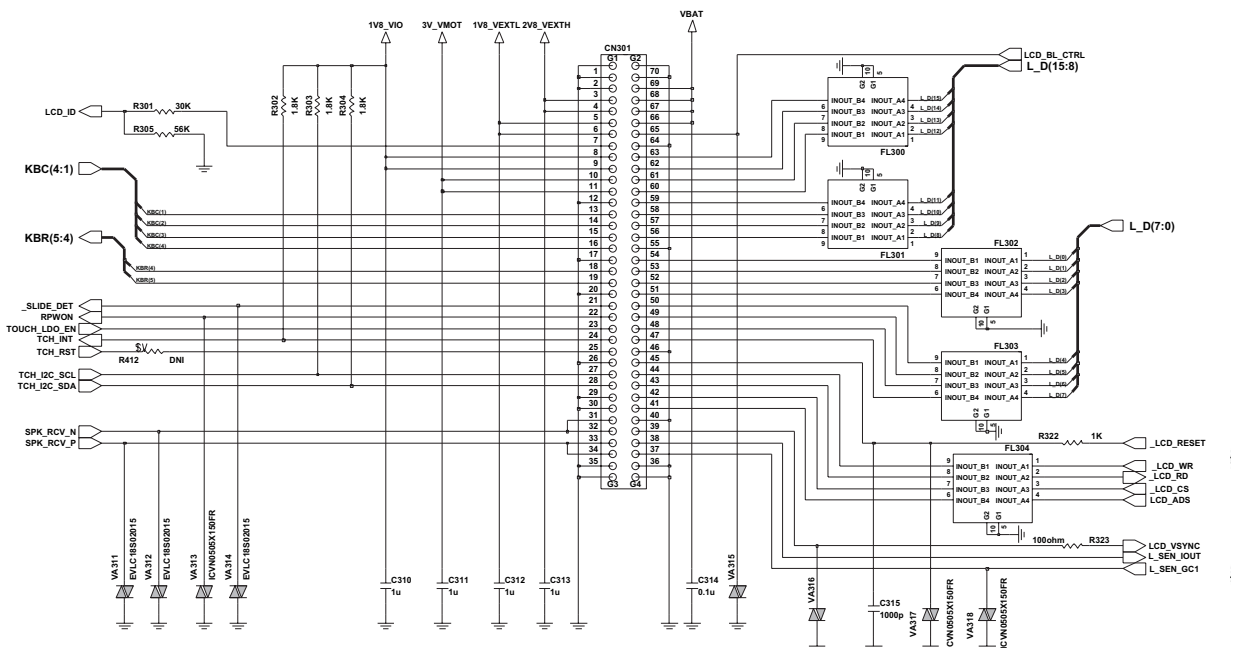


4. TROUBLE SHOOTING

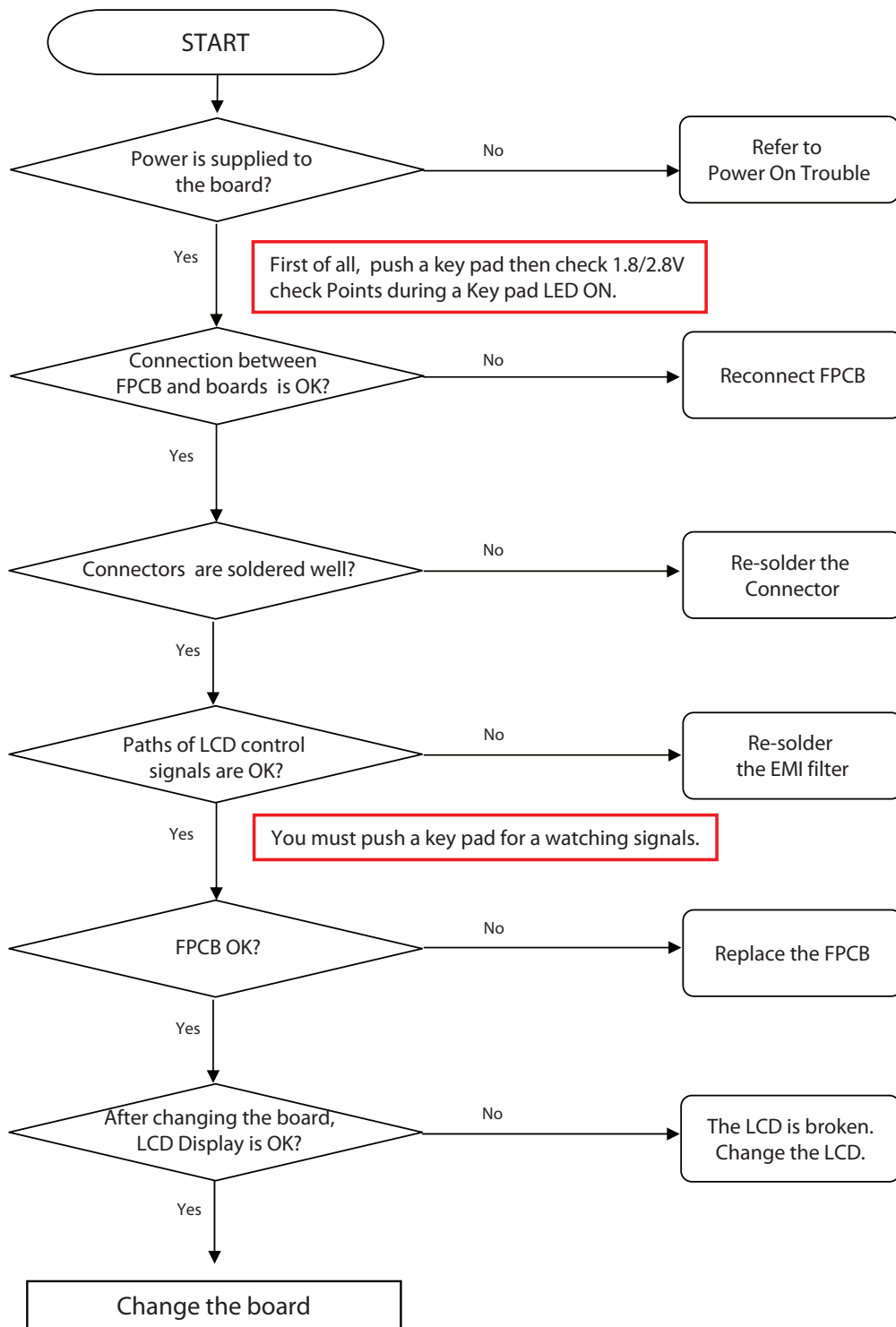
4.5.4 Check Point #4 – Main FPCB Connector



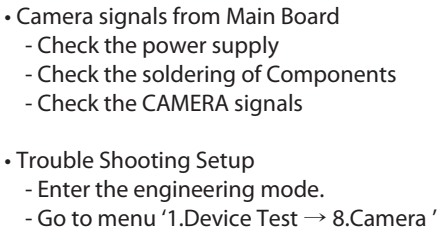
Main FPCB Connector < CN301 >



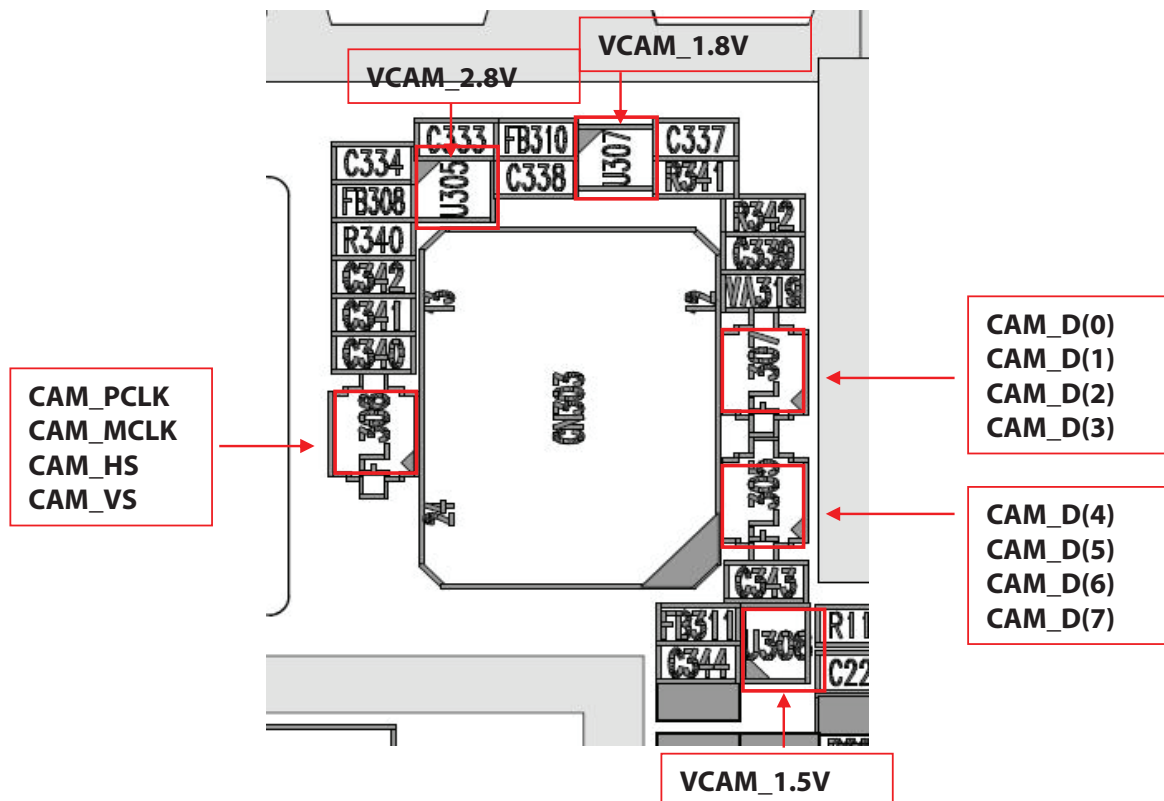
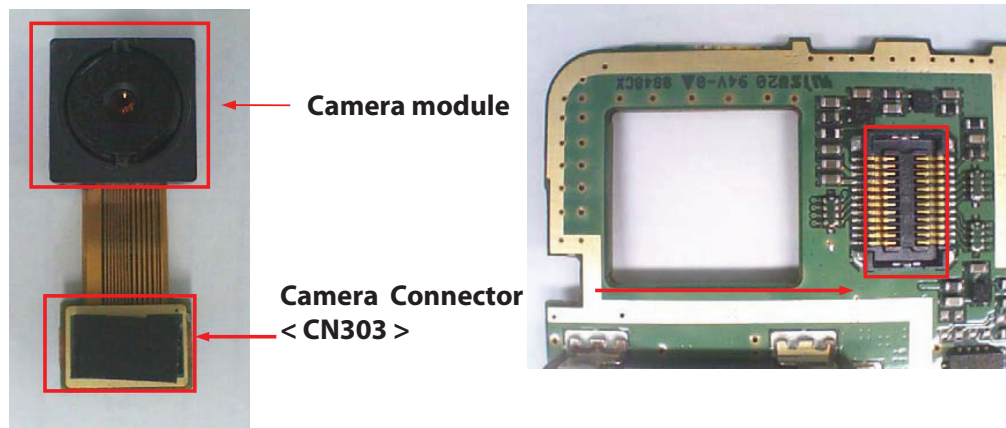
- You must check signals LCD Connector Side of a Main FPCB
because you could check final signal states through EMI Filter, connector, FPCB and etc.



- Camera signals from Main Board
 - CAM_RST, CAM_MCLK, CAM_PCLK, CAM_VS, CAM_HS, PWDN
CAM_D(0) ~ D(7)

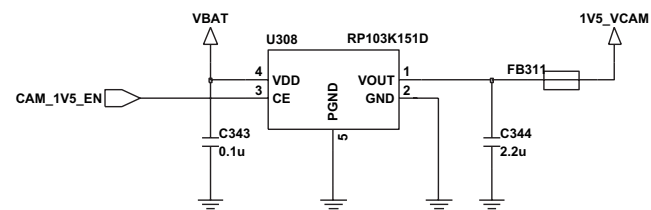
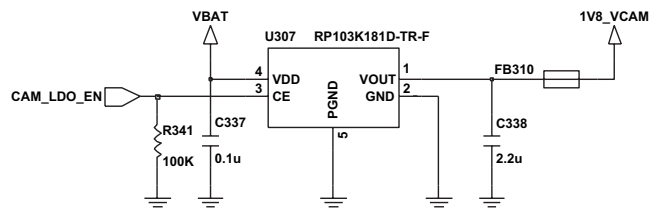
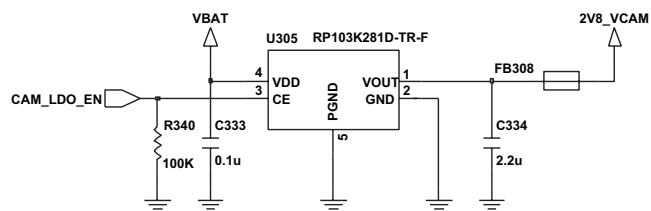
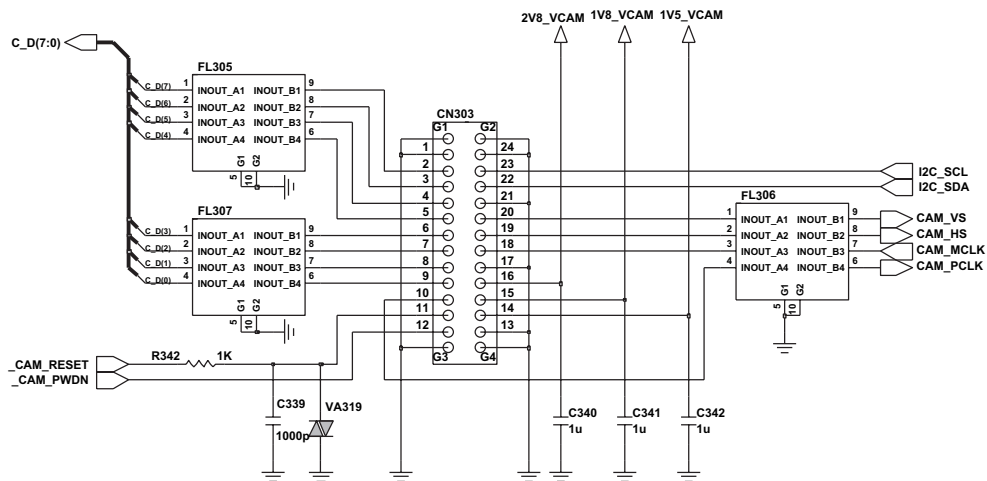


4.6.1 Check Point #1 – Connection of Camera Module

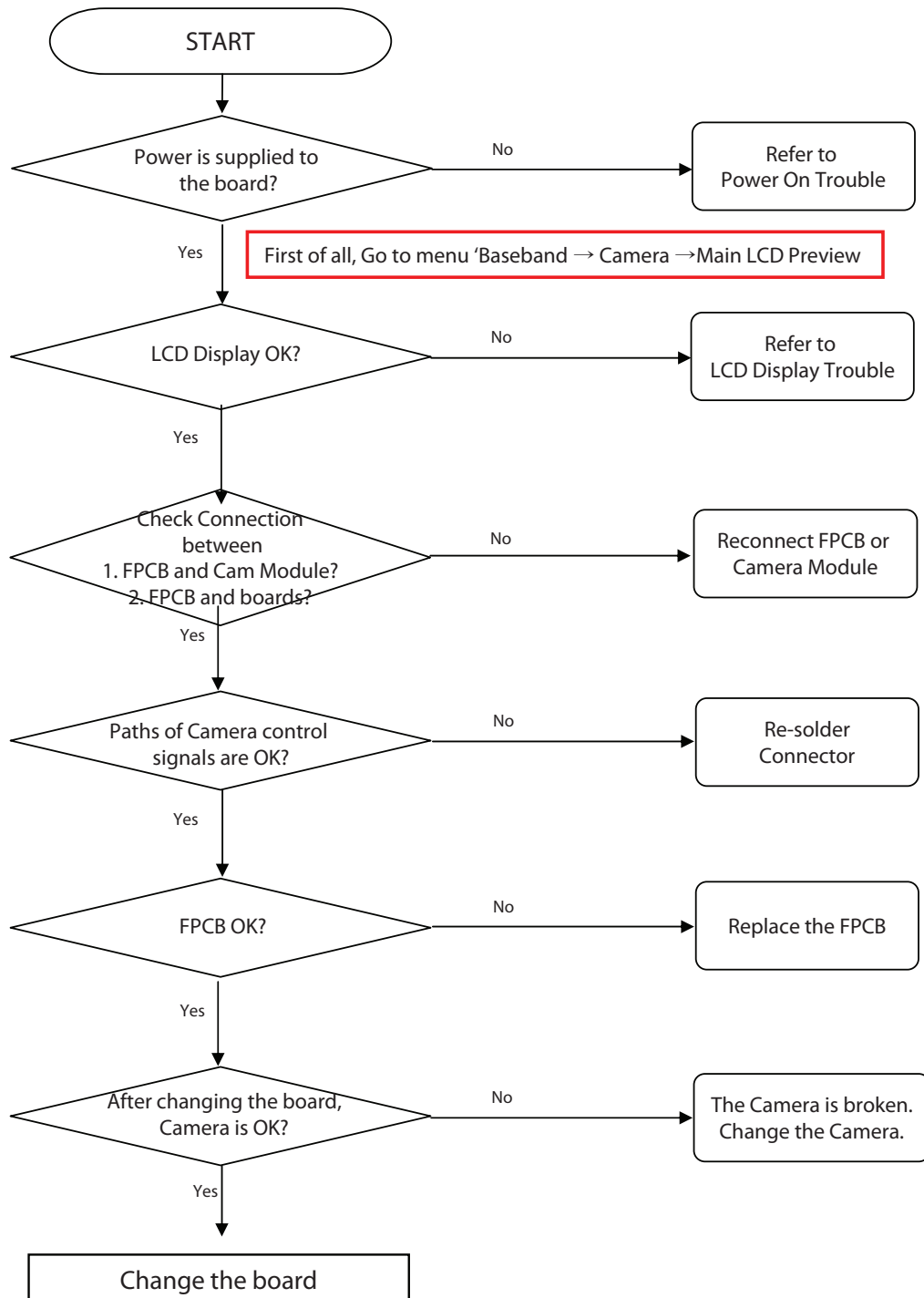


4. TROUBLE SHOOTING

< CN303 Connection of Main PCB >

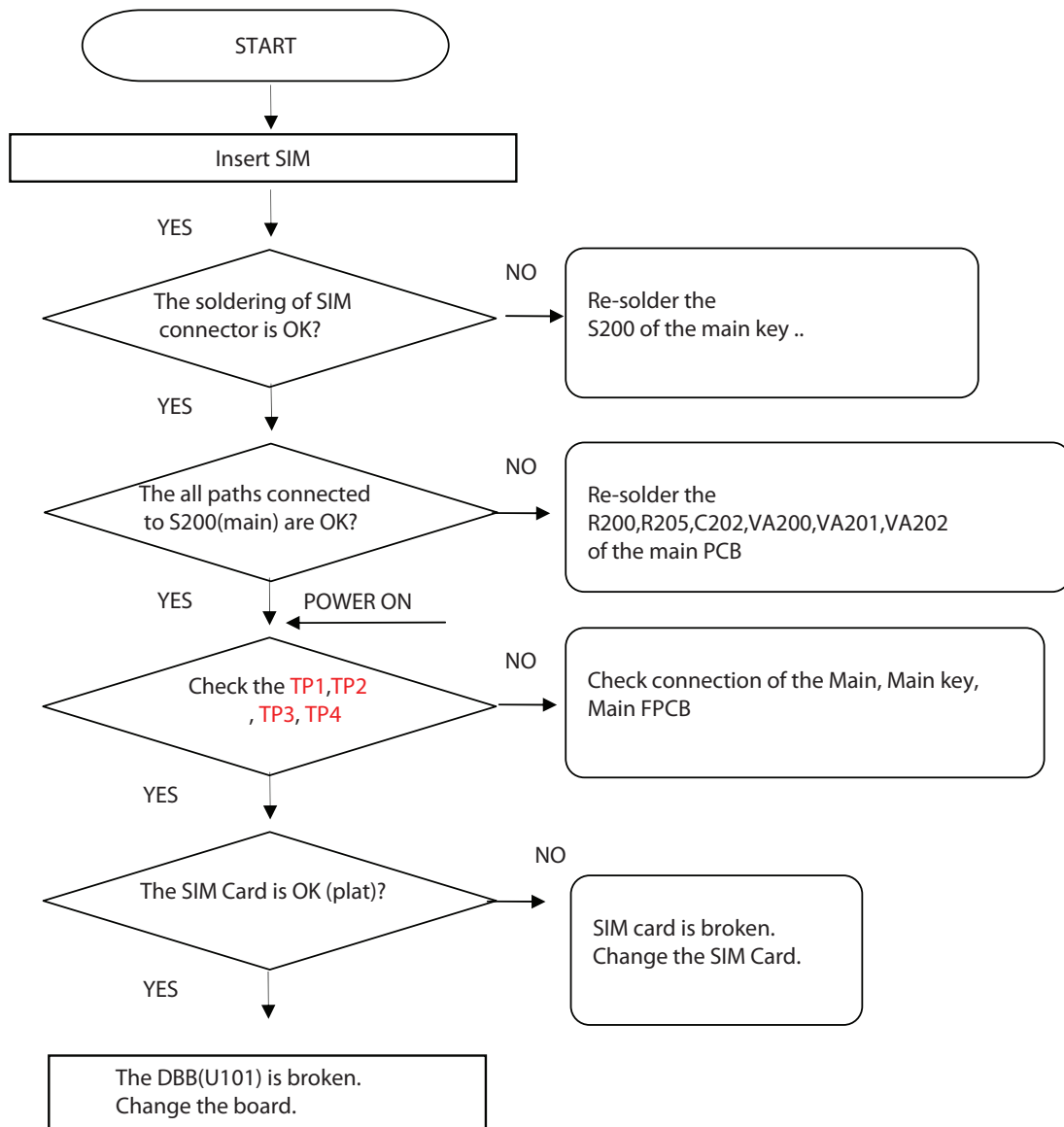


- You must check camera signals at a Connector Side of a Main PCB because you could check final signal states through connector.



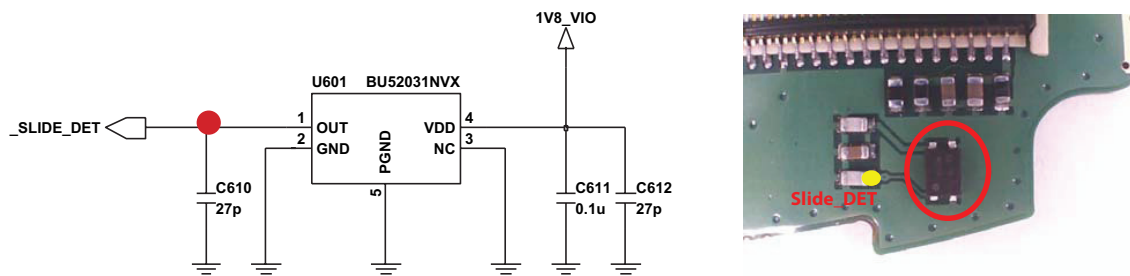
- Connection between SIM and DBB
 - SIM_CLK, SIM_IO, SIM_RST, SIM_PWRCTRL
- Check Points
 - Contact between SIM and socket
 - Soldering of SIM socket
- Trouble Shooting
 - Insert the SIM into socket
 - Connect PIF_UNION Jig to the phone, and Power on
- Trouble Shooting Procedure
 - Check the power supply
 - Check the soldering of SIM socket
 - Check the SIM

4. TROUBLE SHOOTING

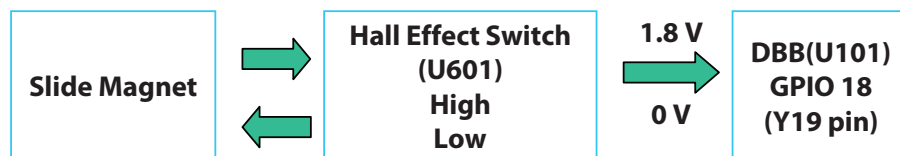


4.8. Slide Up/Down Trouble Shooting

Slide Operation scheme is shown below.



Block Diagram (Folder On/Off)



4.8.1 Slide Operation(ON/OFF)

- There is a magnet to detect the slide status, opened or closed.
- If a magnet is down to the hall-effect switch(U501) the voltage at pin 1 of U601 goes to 0V. Otherwise, 1.8V
- This Slide signal is delivered to DBB, and the status of Slide is reported.

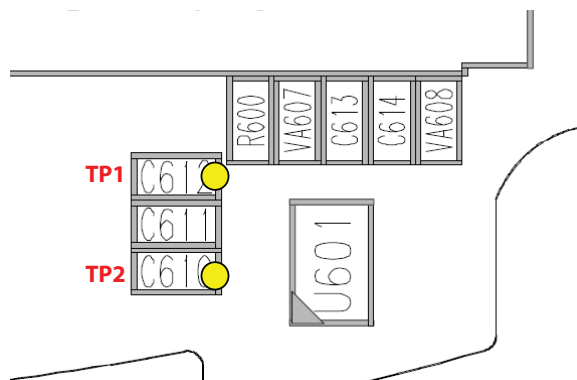
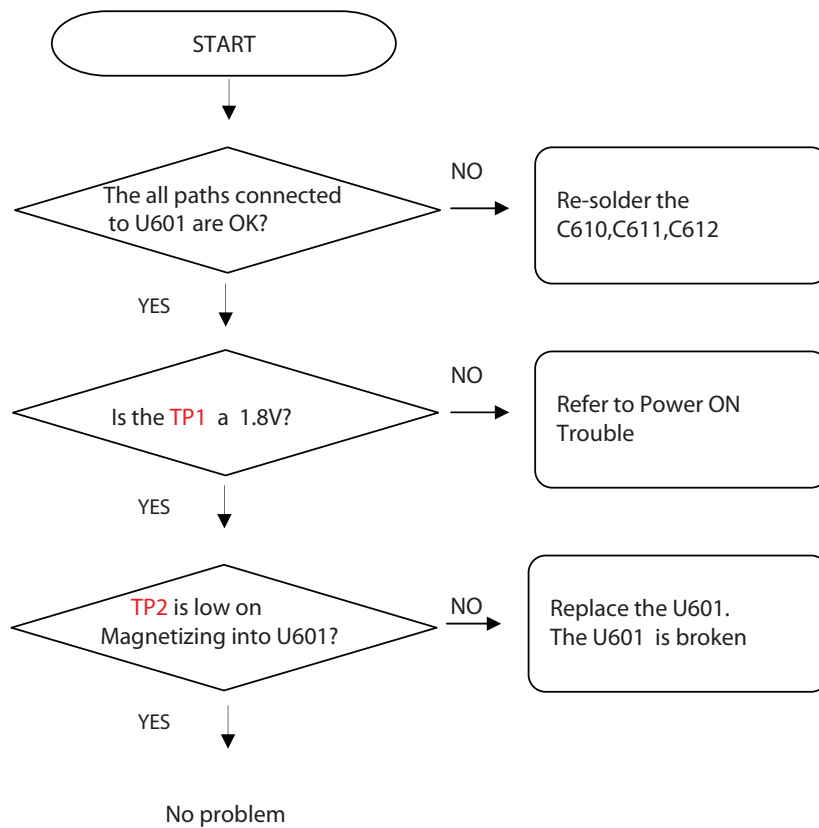
●Slide Signal Status

L : Down (Magnetized) => Slide Down

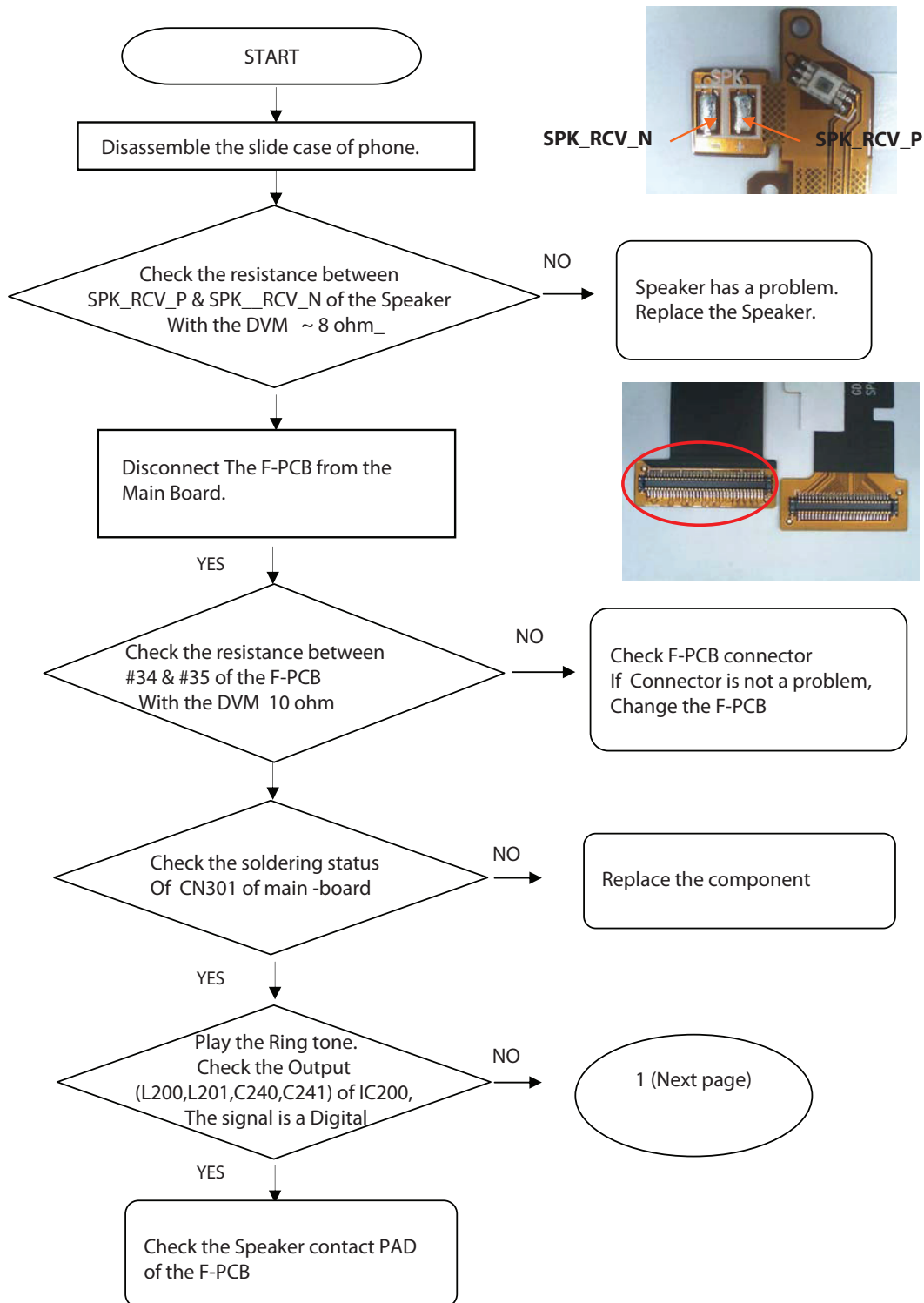
H : Up (Not magnetized) => Slide Up

4. TROUBLE SHOOTING

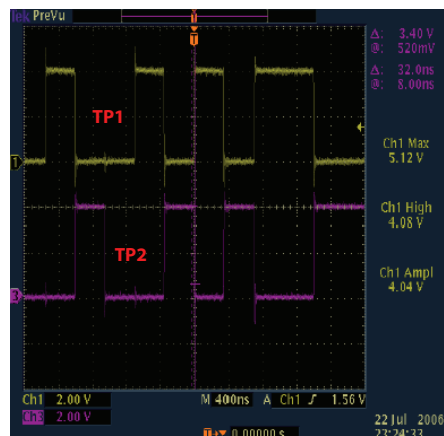
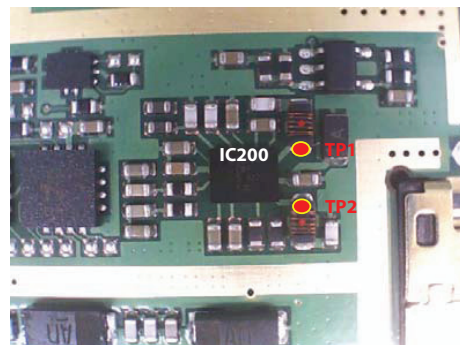
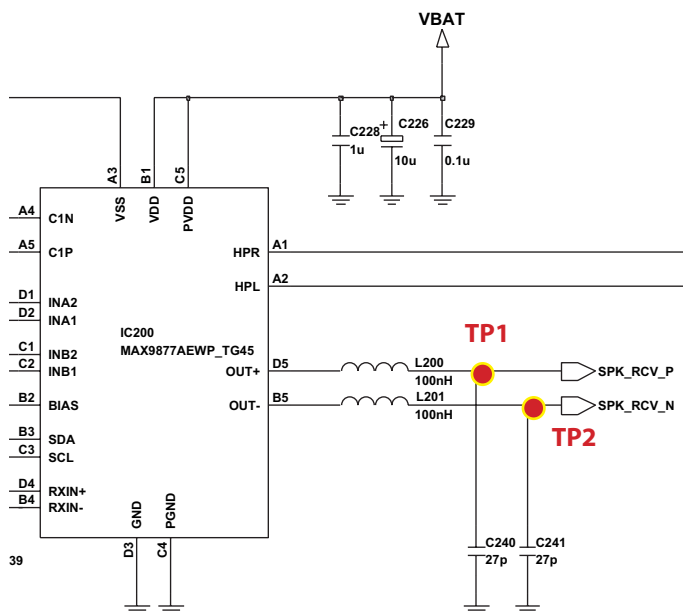
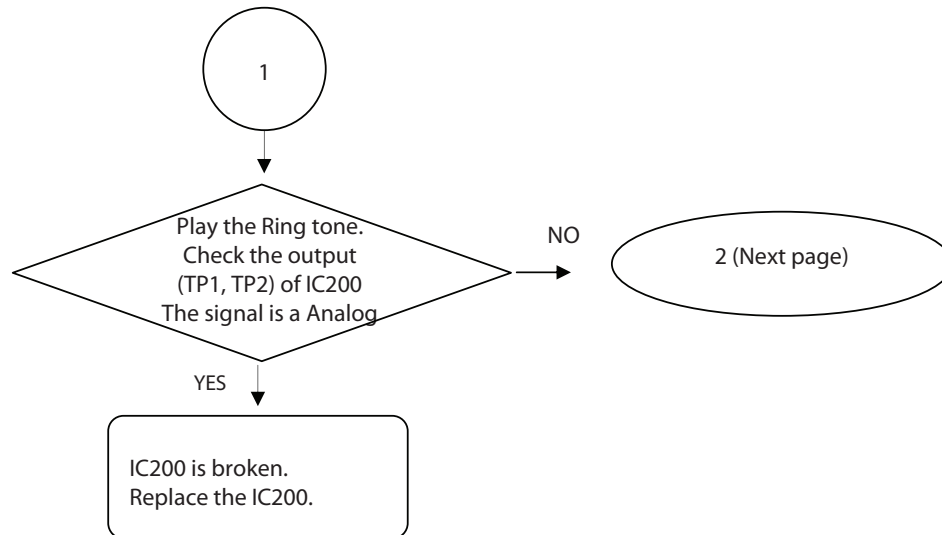
4.8.2 Slide Trouble (ON/OFF)



4.9. Speaker/Receiver Trouble Shooting (Common Path)

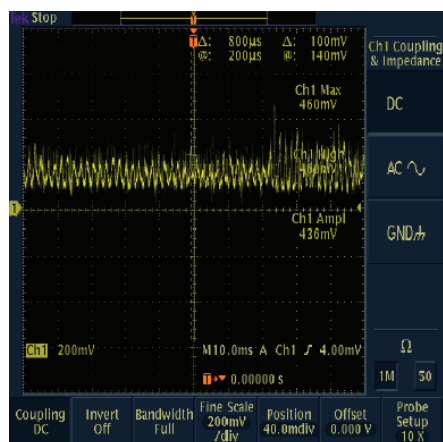
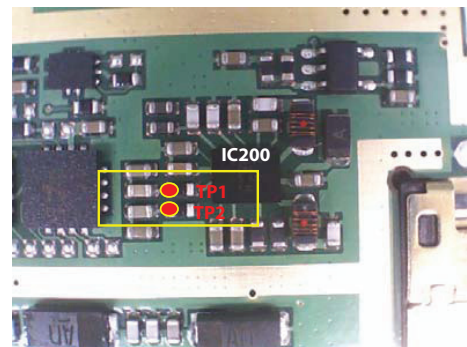
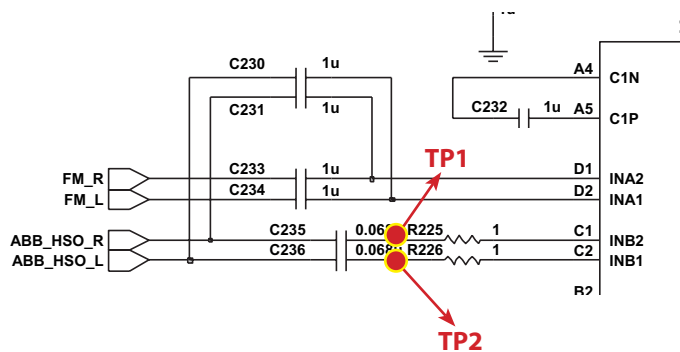
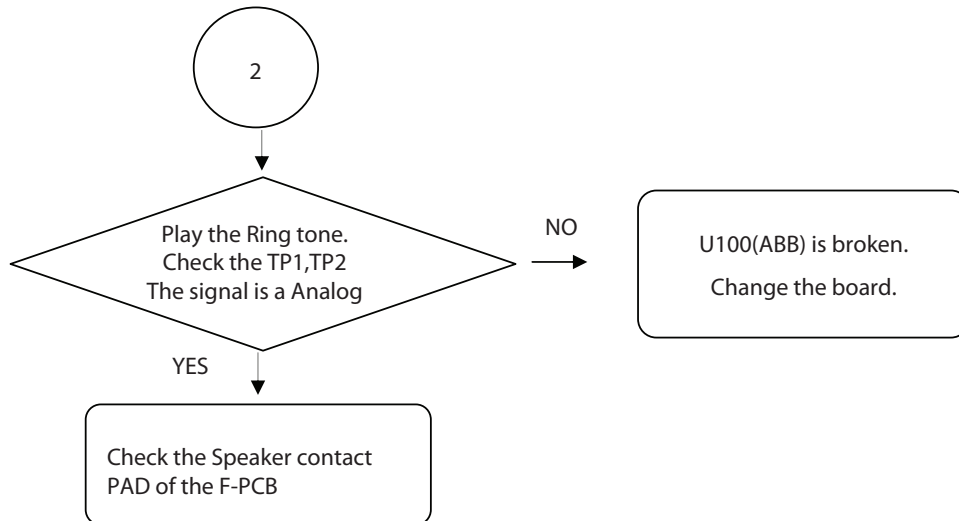


4. TROUBLE SHOOTING



<Fig.> OUTPUT of IC200

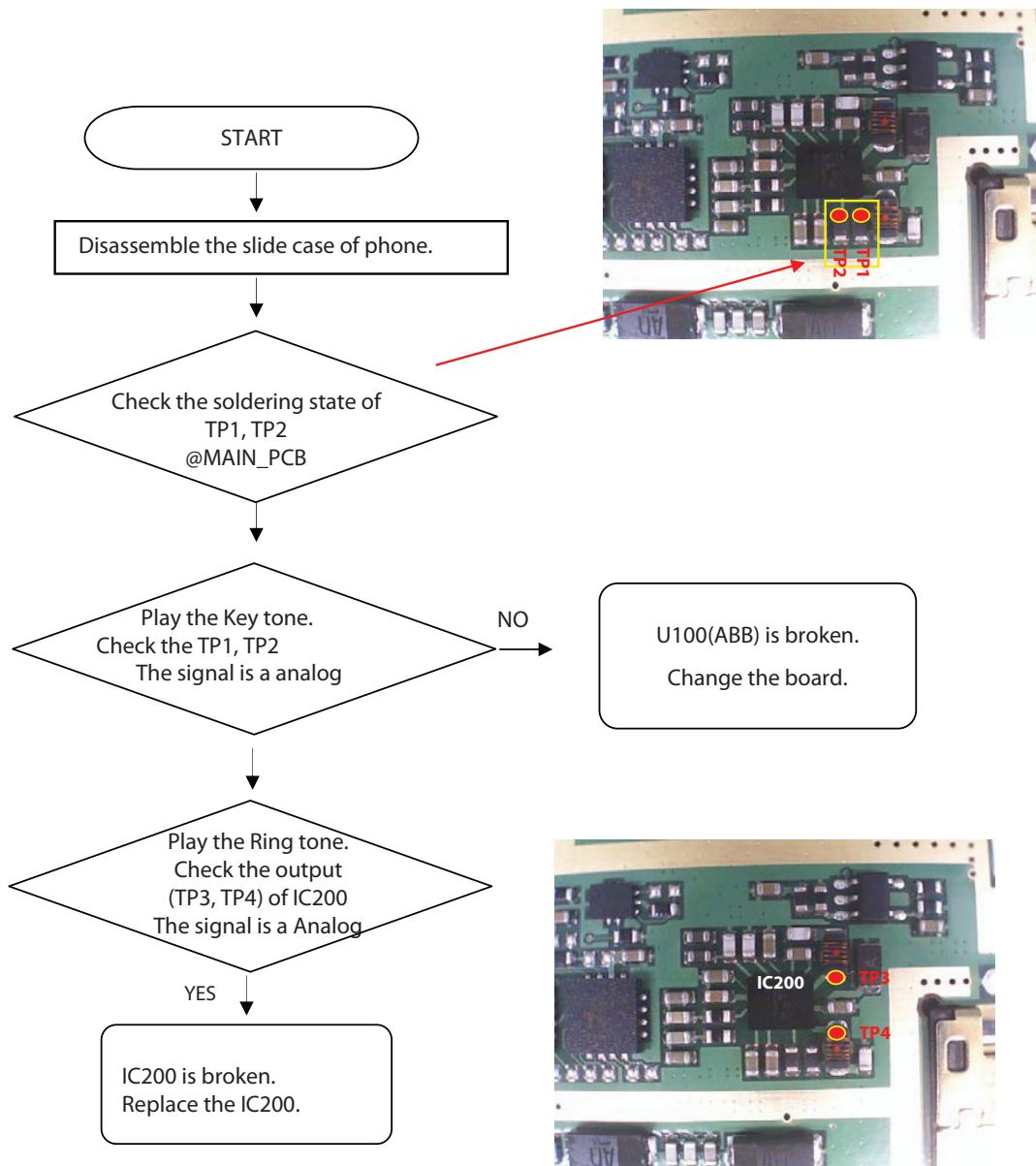
4. TROUBLE SHOOTING



<Fig.> TP1 or TP2

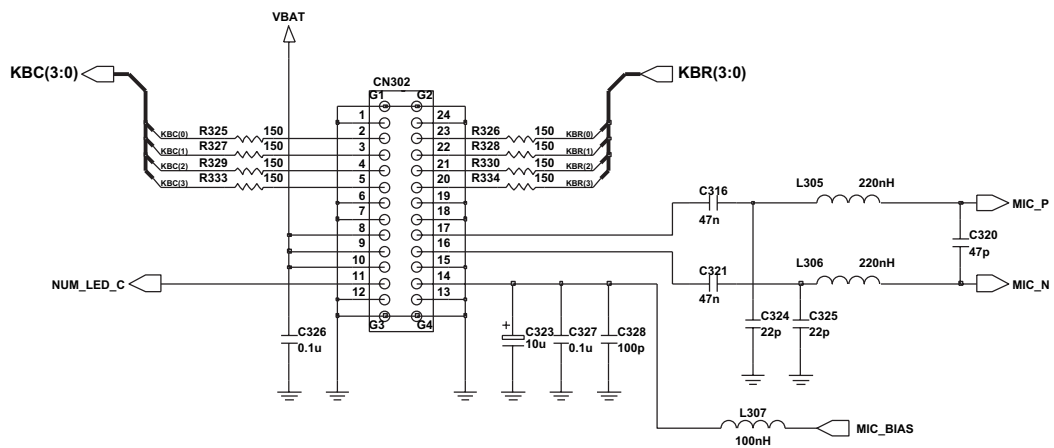
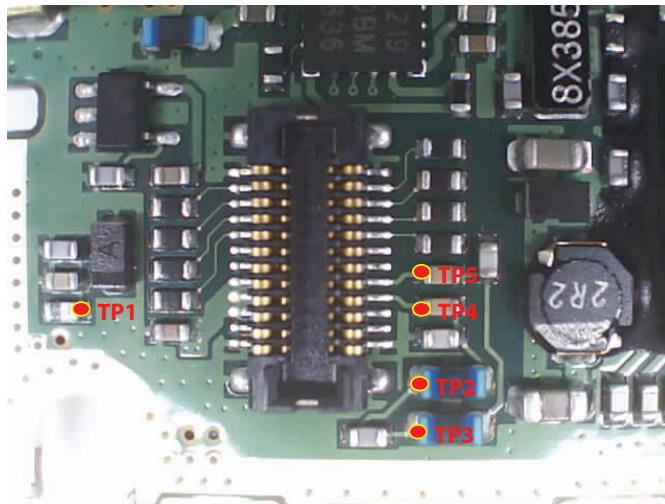
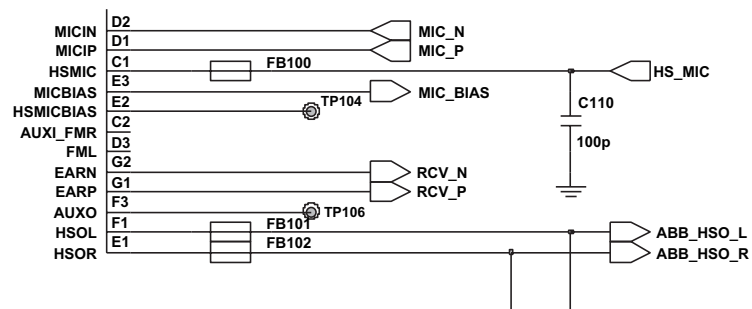
4. TROUBLE SHOOTING

4.10. Speaker/Receiver Trouble Shooting (Acoustic Path)



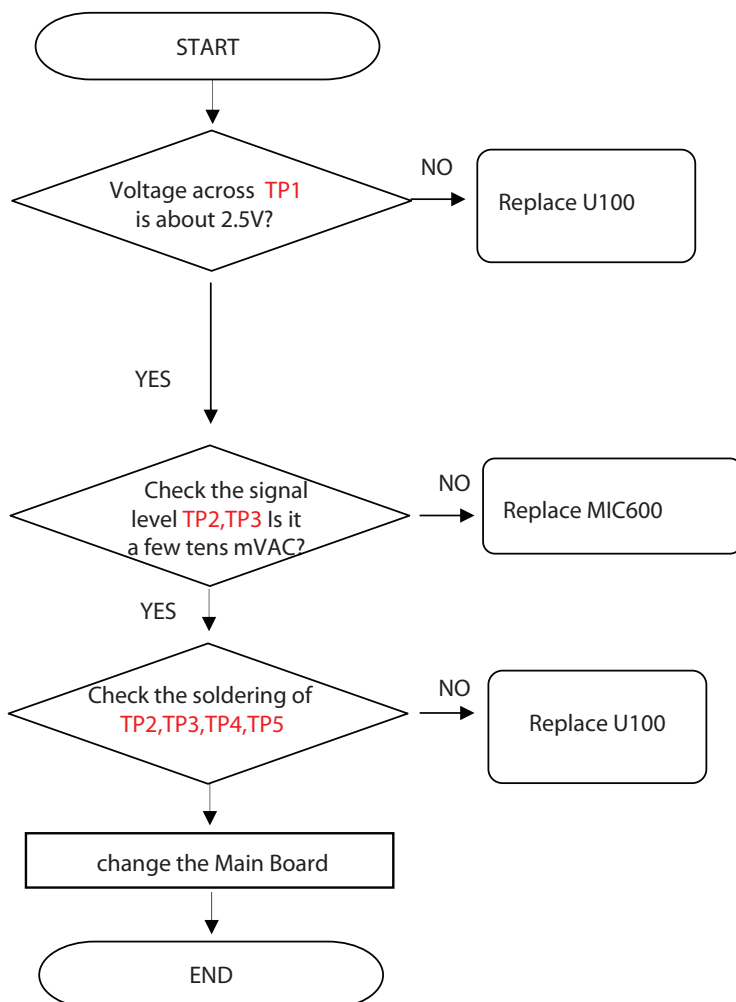
4.11. MIC Trouble Shooting

- MIC Operation scheme is shown below.

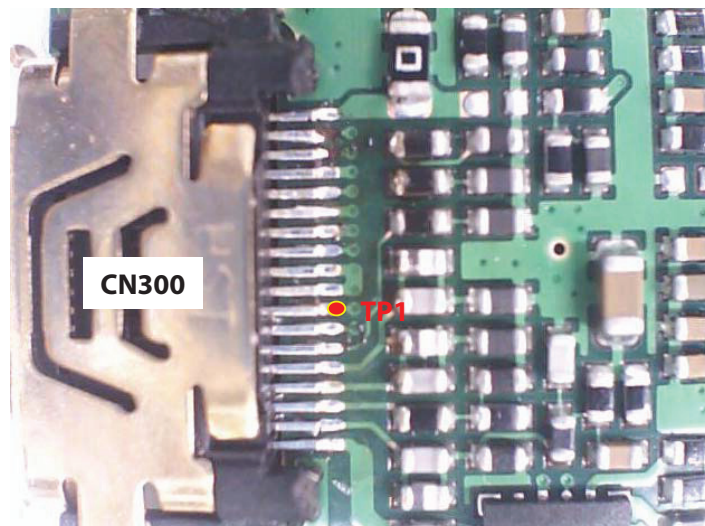
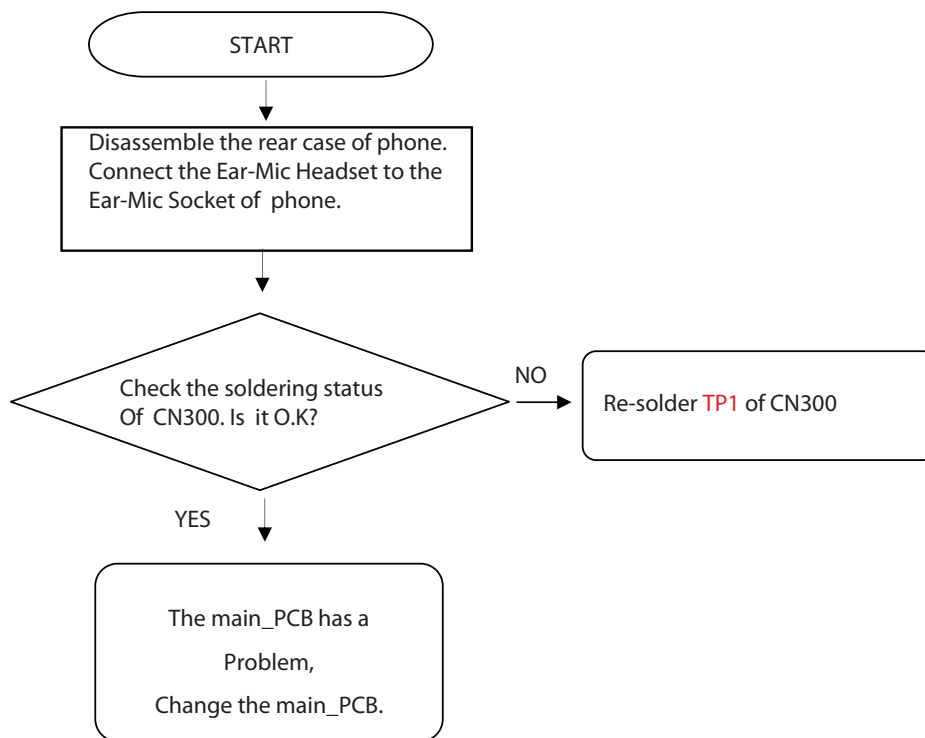


4. TROUBLE SHOOTING

- MIC Trouble
- MIC signal flow
 - MIC is enable by MICBIAS
 - MICBIAS Signal from ABB(U100).
 - MICIN, MICIP signal from MIC(MIC600)
- Check Point
 - MIC bias
 - Audio Signal level of the Microphone
 - Soldering of Components

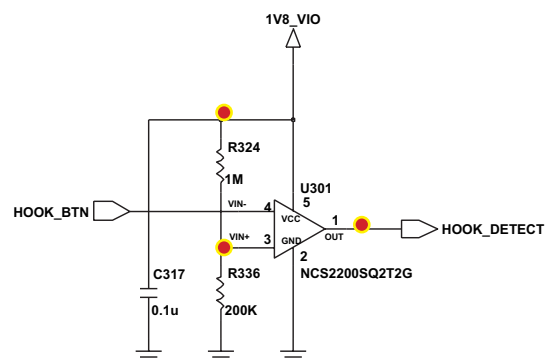
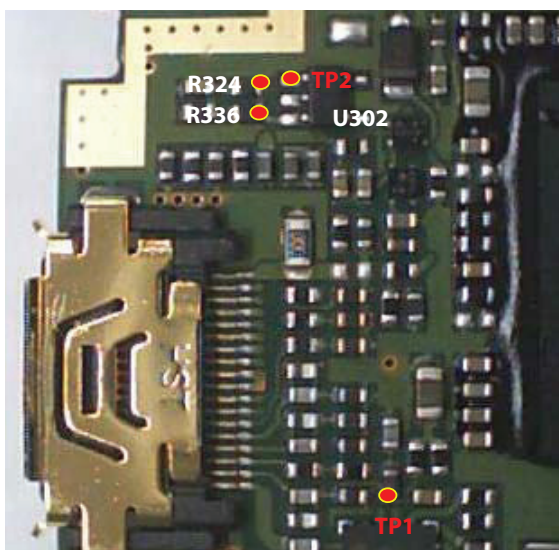
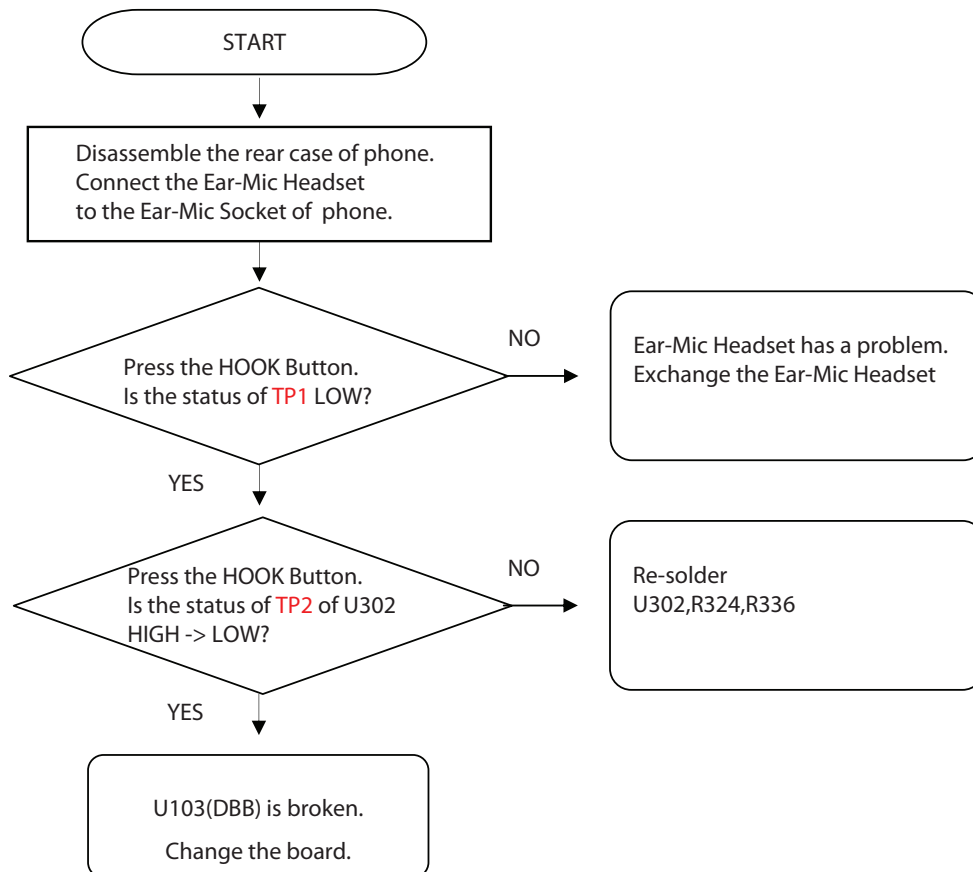


4.12. Ear-Mic Jack Detection Trouble Shooting

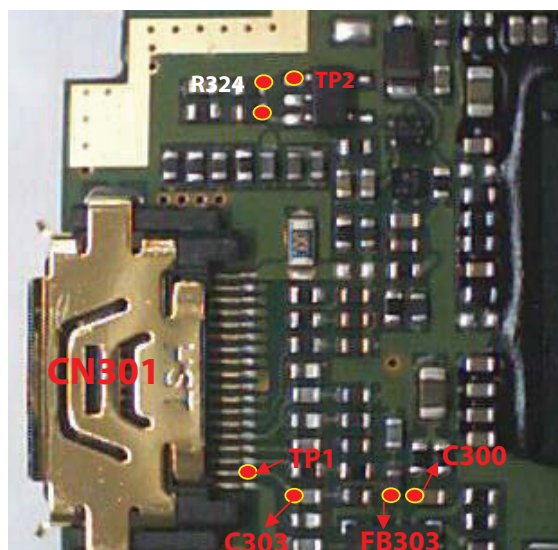
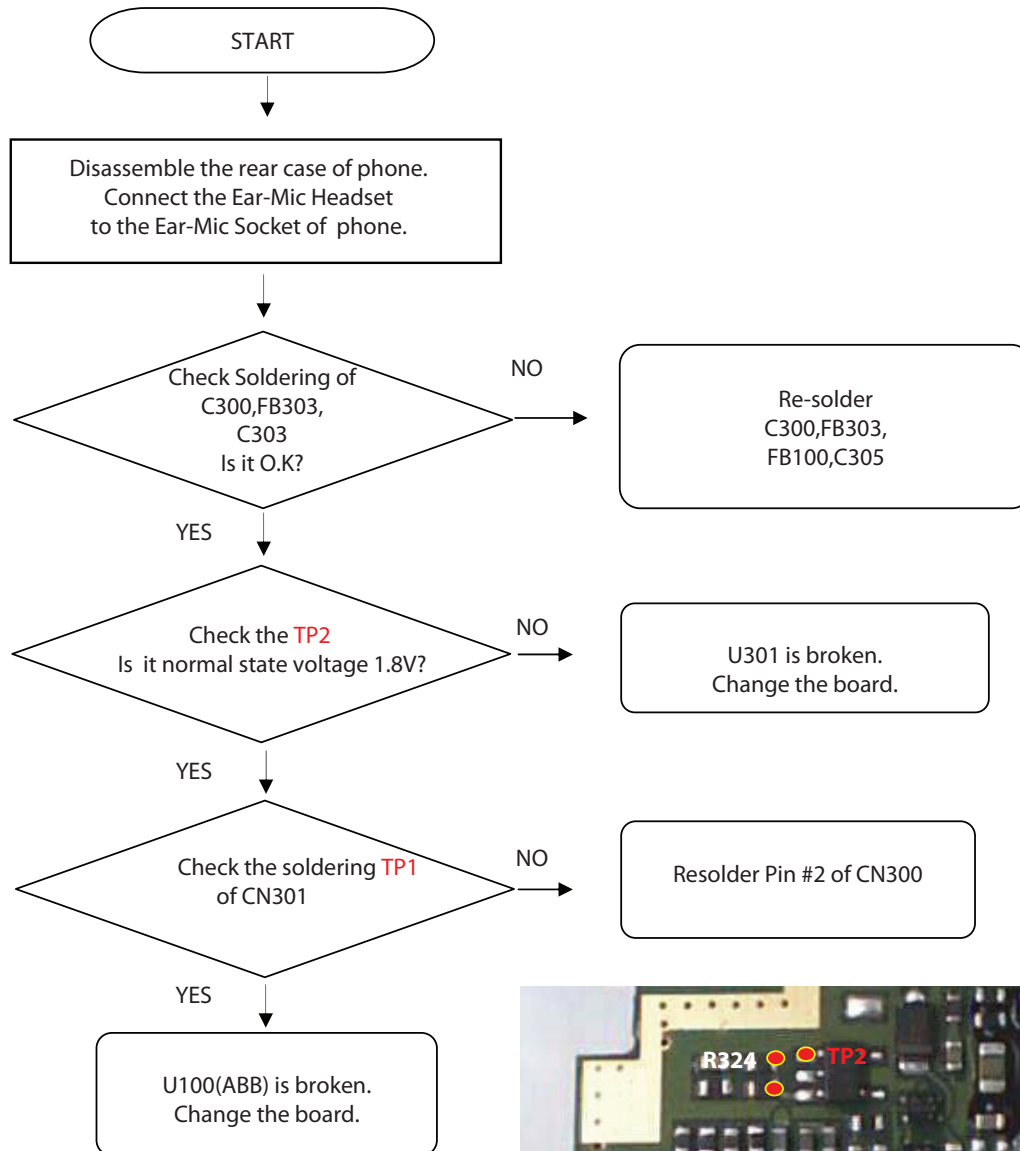


4. TROUBLE SHOOTING

4.13. Ear-Mic Hook Detection Trouble Shooting

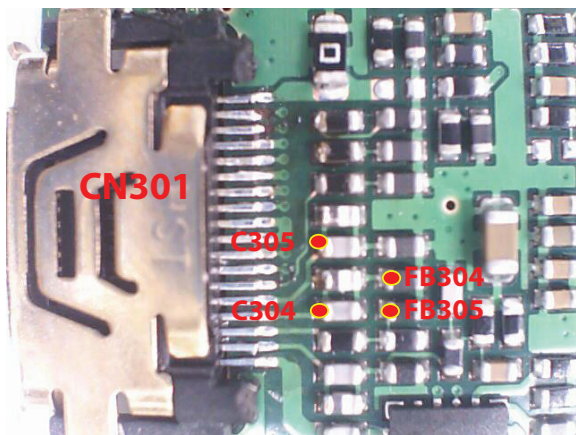
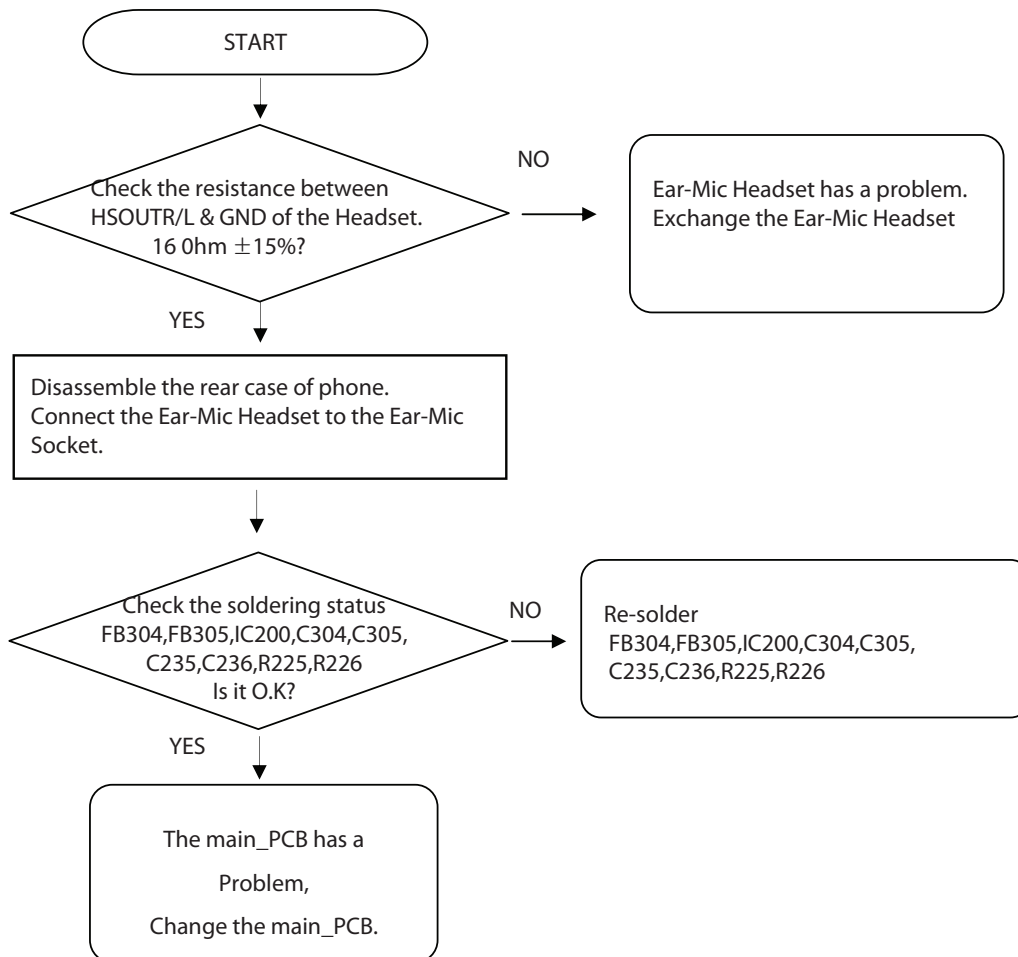


4.14. Ear-Mic Headset MIC Trouble Shooting

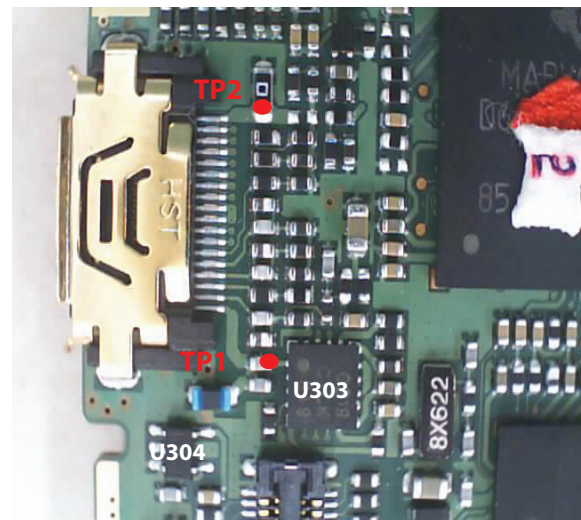
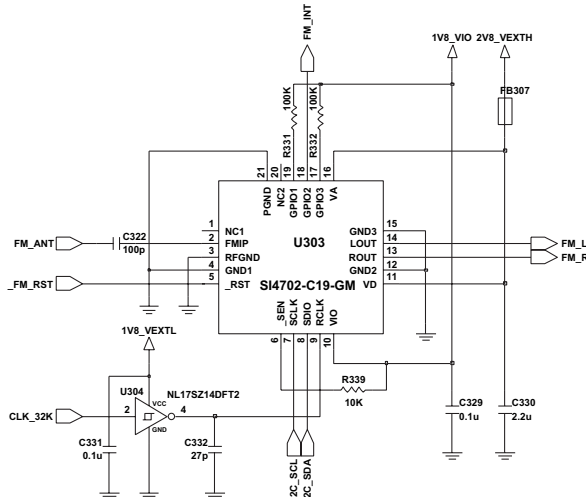
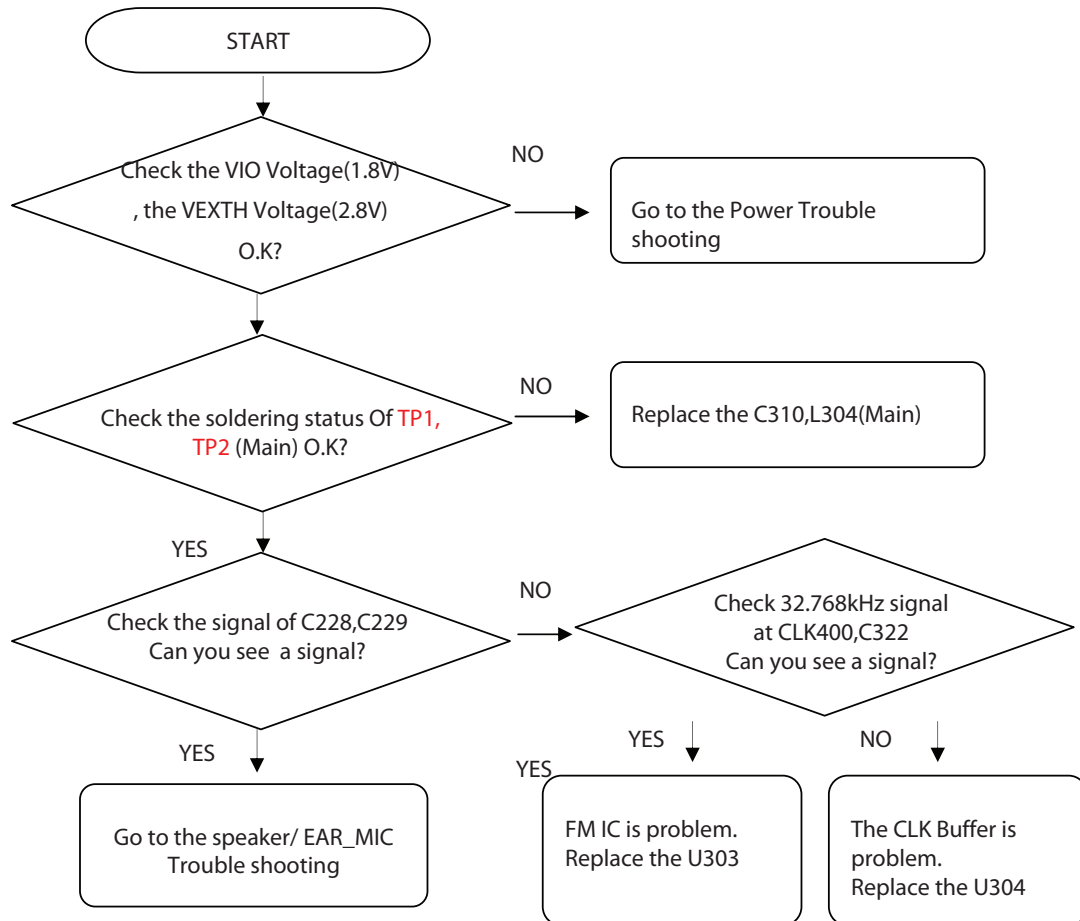


4. TROUBLE SHOOTING

4.15. Ear-Mic Headset HSOR/HSOL Trouble Shooting



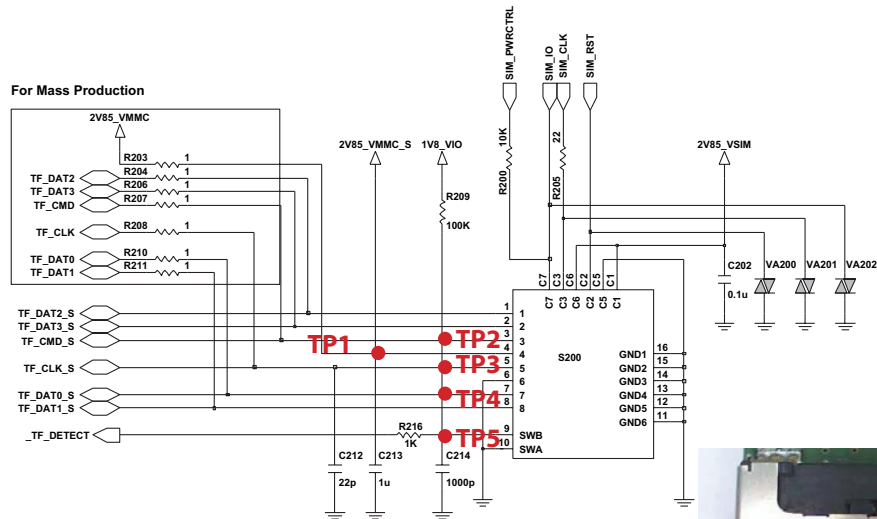
4.16. FM-Radio Trouble Shooting



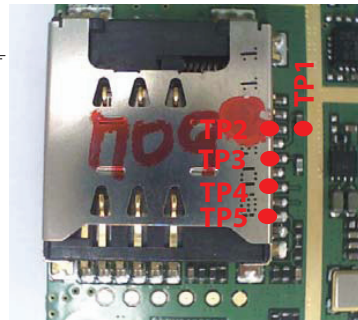
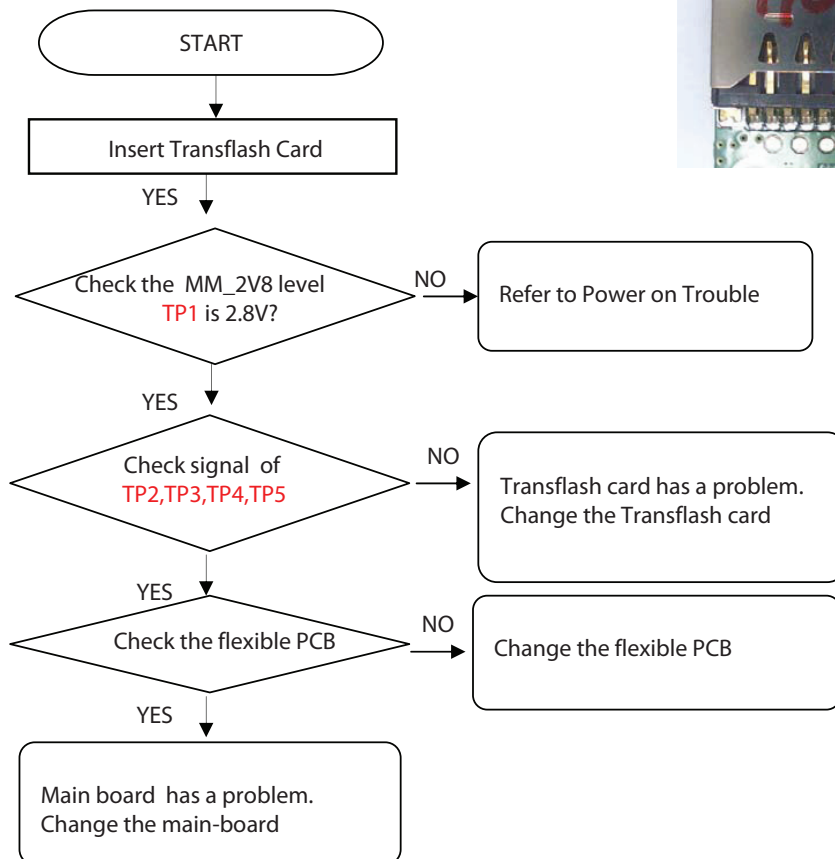
4. TROUBLE SHOOTING

4.17. Transflash Troubleshooting

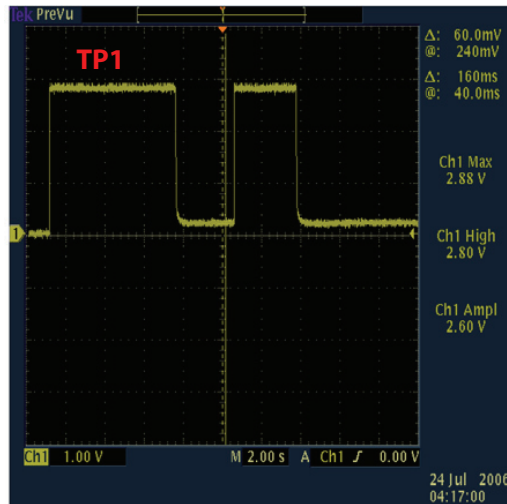
- T- flash Operation scheme is shown below.



- Transflash Trouble

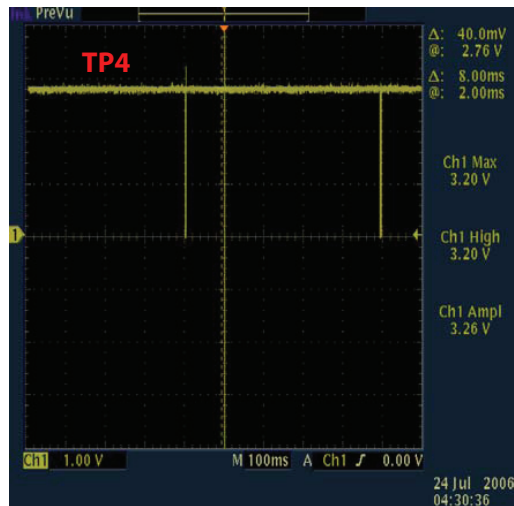


- MM_2V8 Signal(Power ON)



<VRMMC Signal when T-Flash is inserted>

- TF_DAT0 Signal (Music Play)

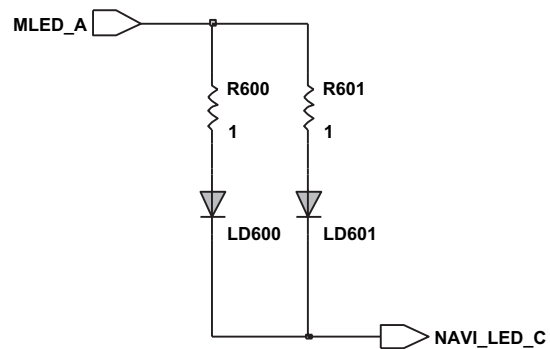
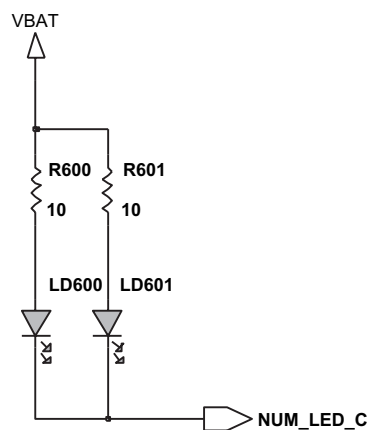
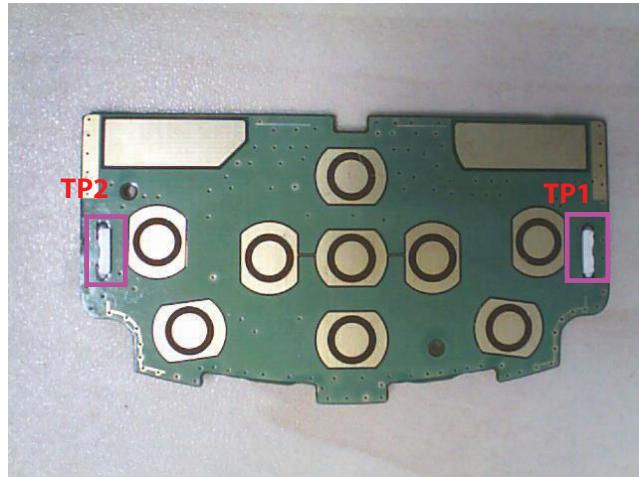


<TF_DAT0 Signal while T-Flash is read>

4. TROUBLE SHOOTING

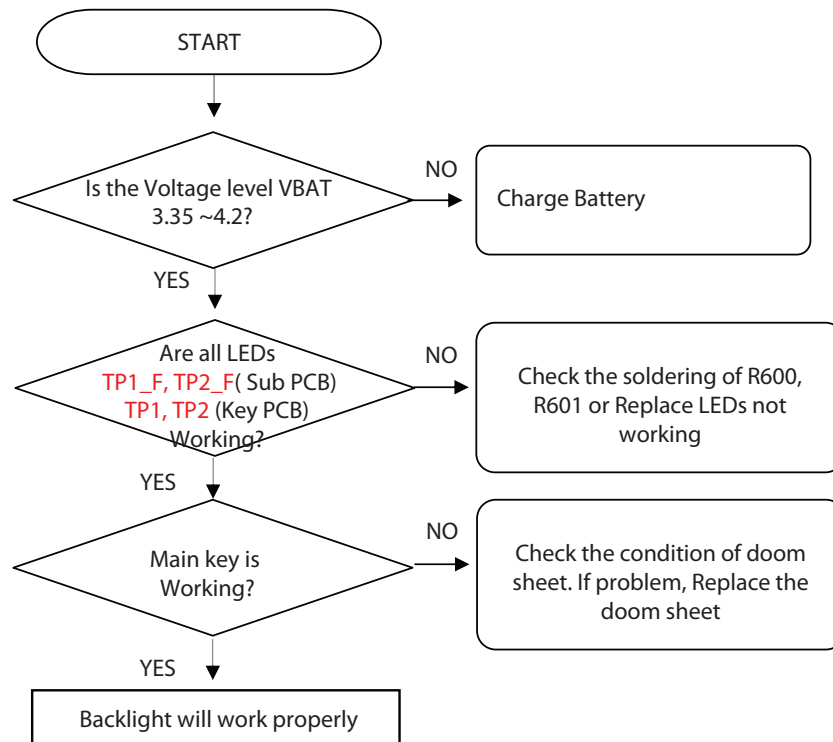
4.18. Main Key Backlight LED Trouble Shooting

- Keypad backlight LED Operation scheme is shown below.

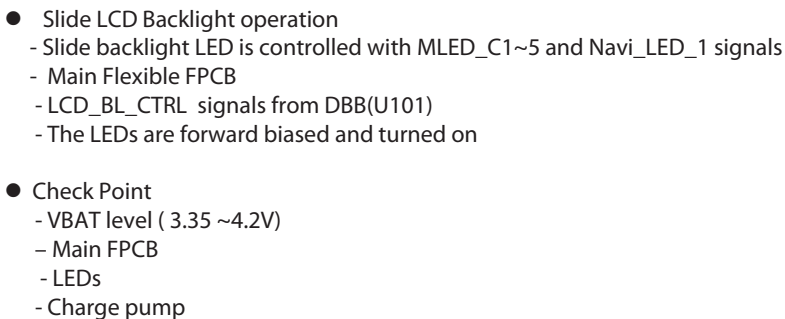


- Backlight operation
 - Keypad backlight LED is controlled with LED_BC signal
 - LED_BC signal from DBB(U100)
 - The LEDs are forward biased and turned on
- Check Point
 - VBAT level (3.35 ~4.2V)
 - LEDs
 - Main key, Main, Main FPCB connection

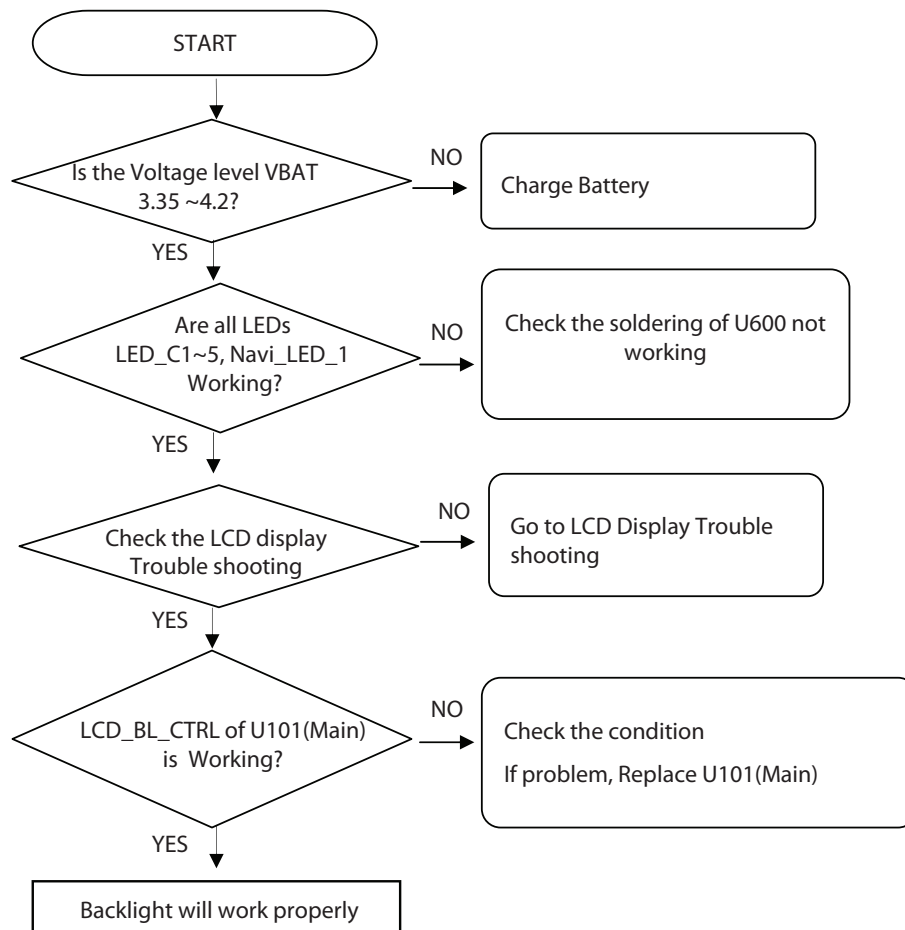
- KEY Backlight LED Trouble



- Slide LCD backlight LED Operation scheme is shown below.



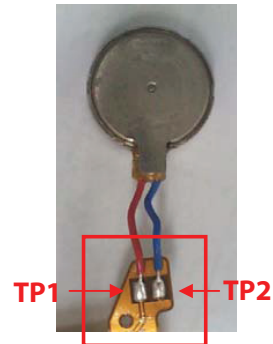
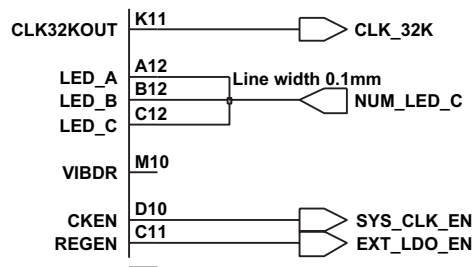
4.19.1. LCD Lighting LED Trouble Shooting



4. TROUBLE SHOOTING

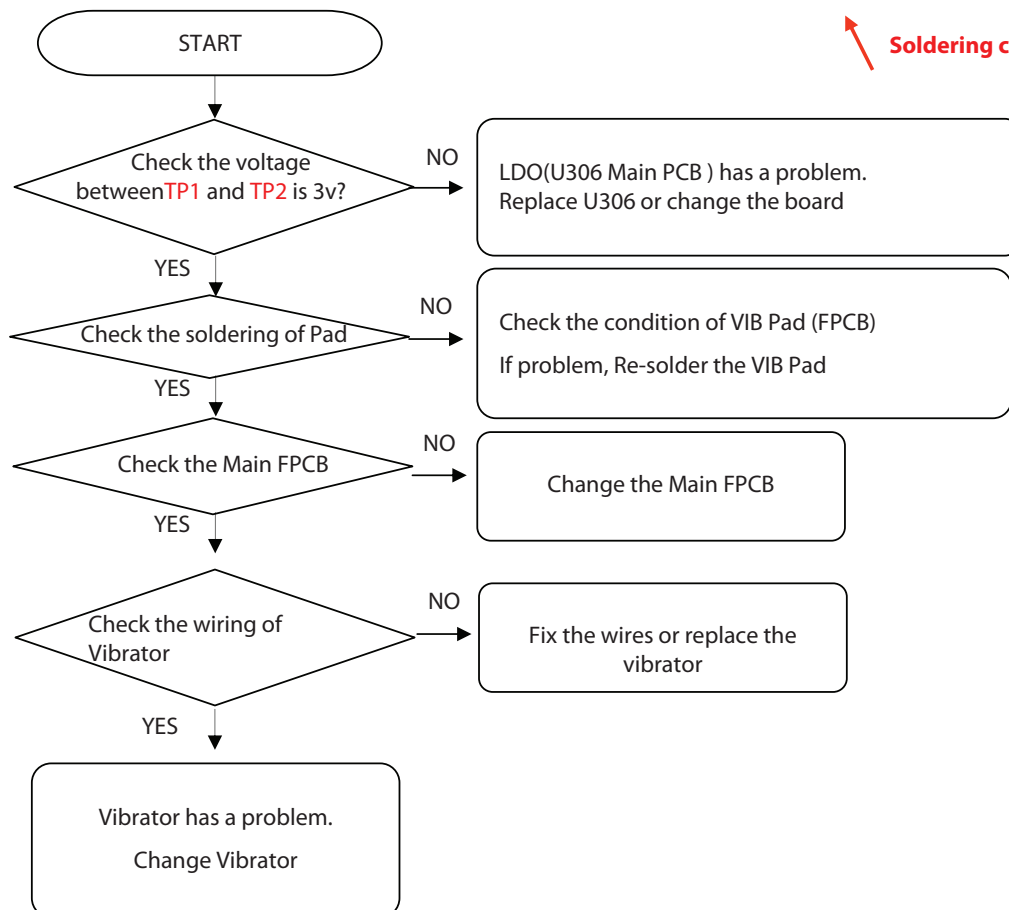
4.20. Vibrator Trouble Shooting

- Vibrator operation scheme is shown below



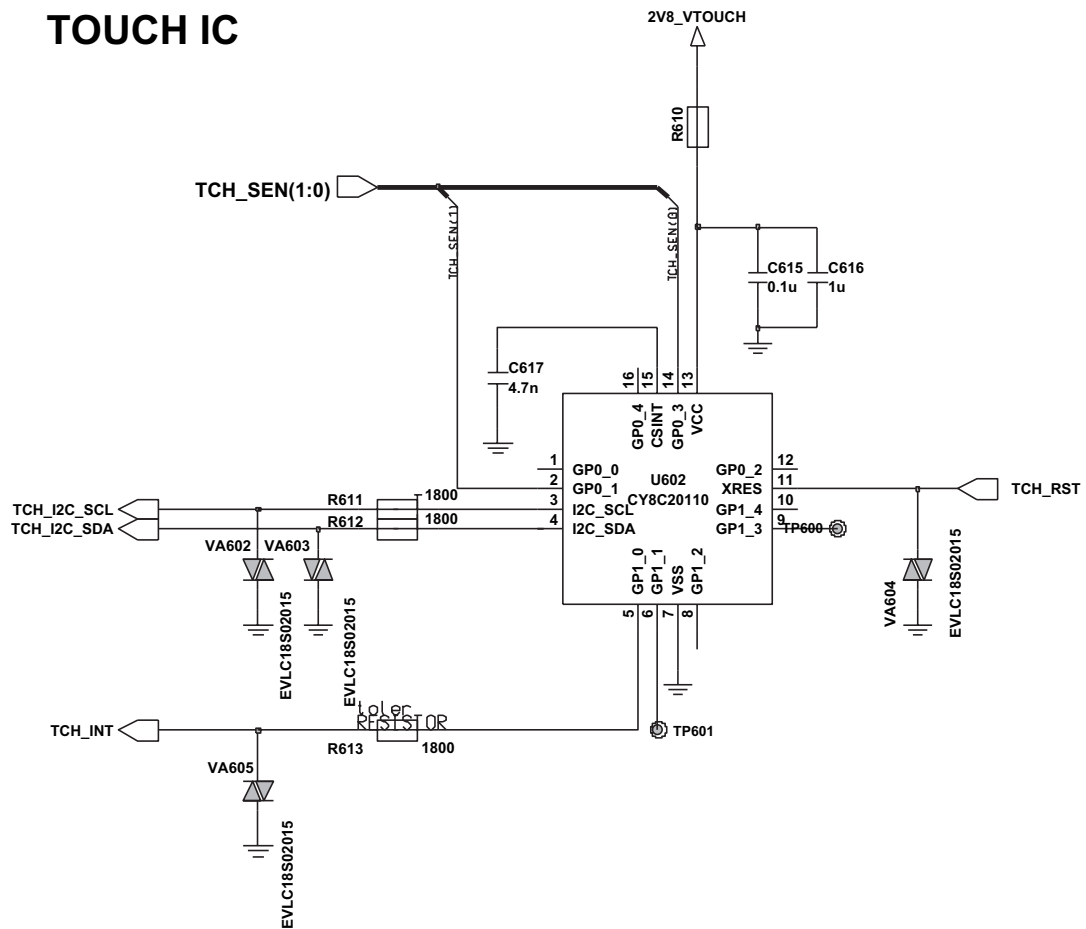
↗ Soldering check

- Vibrator Trouble



4.21. Touch Trouble Shooting

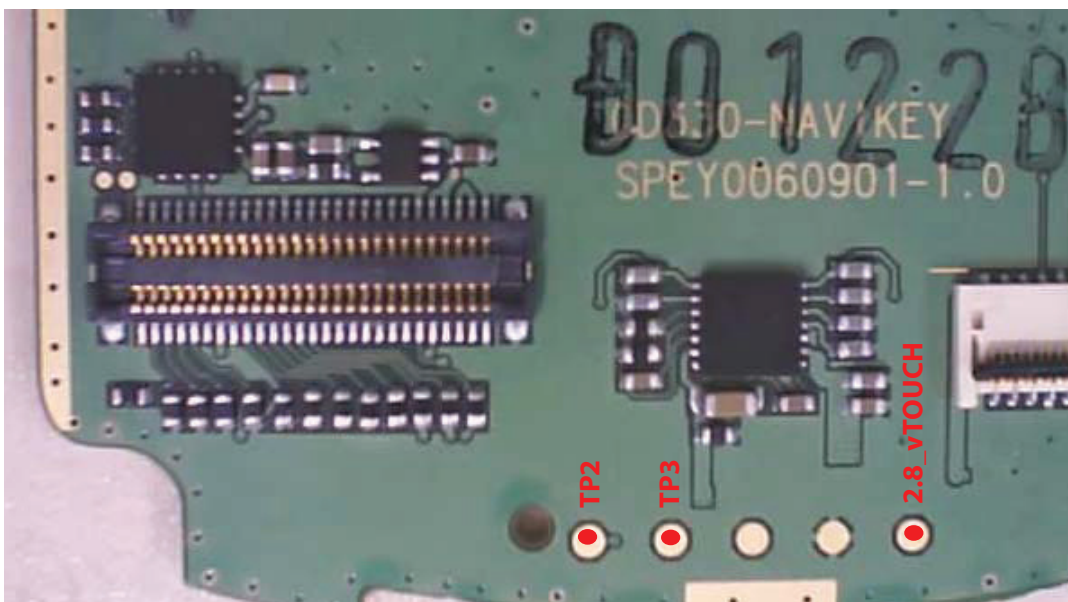
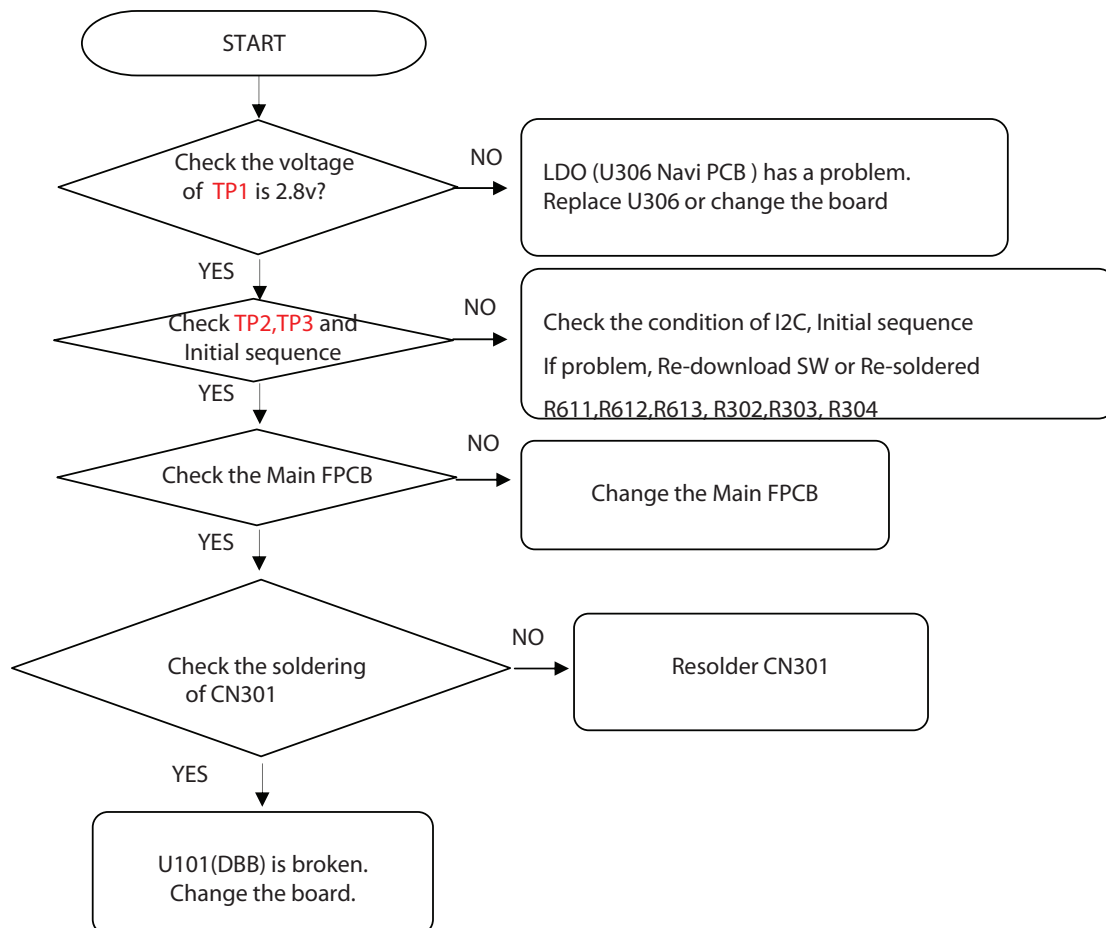
TOUCH IC



- Check Point
 - Touch Voltage (2.8v LDO)
 - I2C control
 - Touch IC
 - Initial Sequence

4. TROUBLE SHOOTING

4.21.1 Touch Trouble Shooting



5. Downloading

5.1. Downloading Software

5.1.1. The purpose of downloading software

5.1.1.2 To make a phone operate at the first manufacturing

- A phone = Hardware + Software
- A phone cannot operate with hardware alone.
- The hardware with the suitable software can operate properly.

5.1.1.2. To upgrade the software of the phone

- The software of the phone may be changed to enhance the performance of the phone.
- The older version software of the phone can be replaced to the newer version.

5.1.2. The Environment of Downloading Software.

5.1.2.1 In case of using the USB Data Kit



5.1.2.1.1. The Preparation

- Target Handset (GD330)
- USB Data kit


5. 1.2.1.2. IBM compatible PC supporting USB with Windows 98 or newer

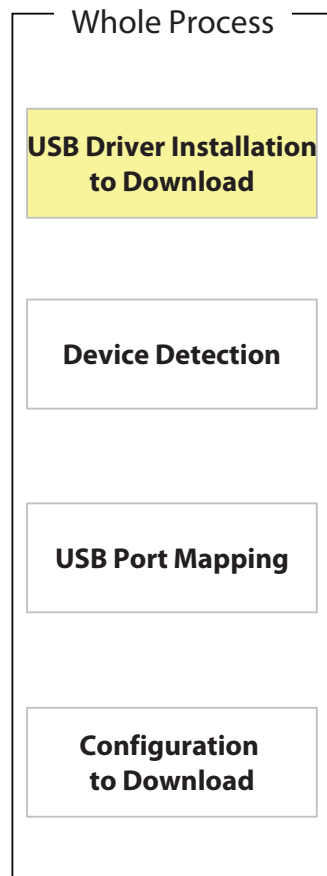
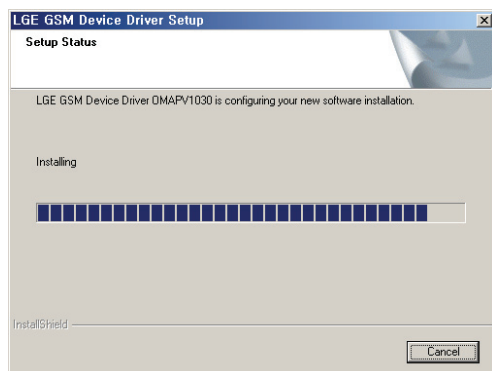
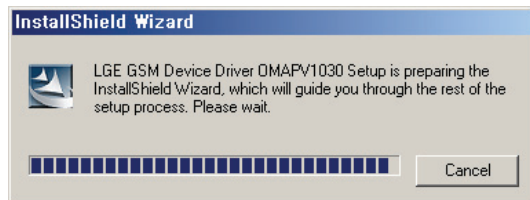
5. DOWNLOAD

5.2.1.2

1. USB Driver Installation to Download - NEPTUNE

1. Run "LGE_GSM_Device_Driver_OMAPV1030_1.0" for Installation Neptune usb driver.

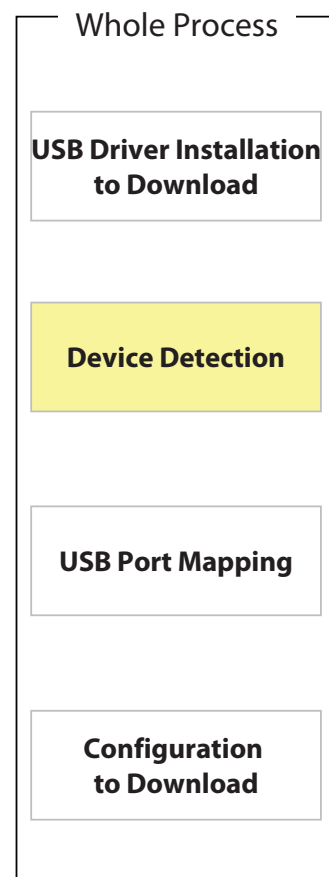
 LGE_GSM_Device_Driver_OMAPV1030_1.0.exe



5.2.1.2

2. Device Detection

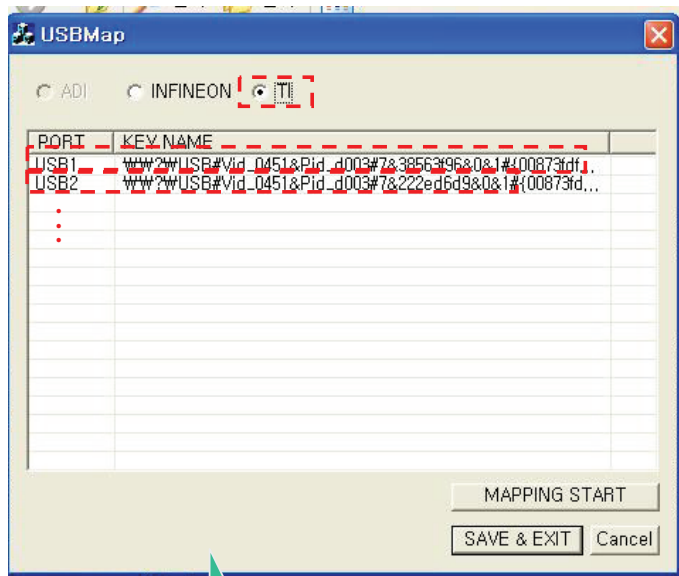
1. Connect cable within the device.
2. Windows will pop-up Found new hardware wizard and detect the new usb device.
3. Check “**Install the software automatically** (Recommended)” button, install driver for the device. (or set specific location.)
4. In case of Infineon, “Flash Loader utility” will be installed.
In case of Neptune, “**LGE GSM Device OMAPV1030**” will be installed.
5. If you have several usb ports for usb download, you have to repeat installation from No. 1 to No. 3 for each the usb port.



5. DOWNLOAD

5.2.1.2

3. USB Port Mapping



Connection in 1st port Connection in 2nd port

1. Run **USB Map** Program and check solution, click mapping start.
2. Connect the usb or nexus cable with the device in order of port number.
3. If you have the disable port, click "SKIP" button.
4. After mapping is completed, click "Save & Exit" button.

Whole Process

**USB Driver Installation
to Download**

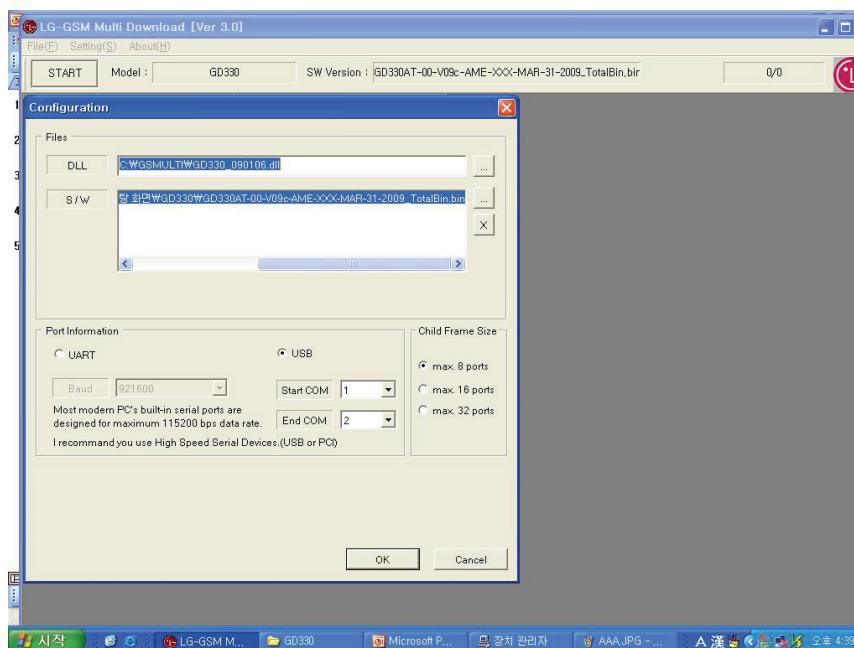
Device Detection

USB Port Mapping

**Configuration
to Download**

5.2.1.2

4. Configuration to Download



1. Run GSMULTI after version 3.0.
2. Select "Model DLL" file (for GD330, GD330_090106.dll)
3. If the model is supported usb download, USB button will be appeared.
4. If the model is supported both interface, you can choice one.

Whole Process

USB Driver Installation
to Download

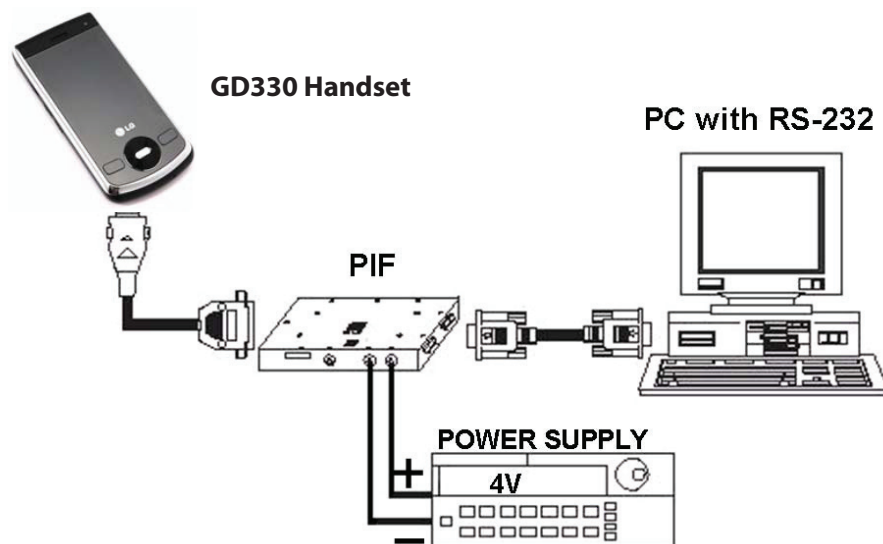
Device Detection

USB Port Mapping

Configuration
to Download

5. DOWNLOAD

5.1.2.2. In case of using the PIF(MON Port)



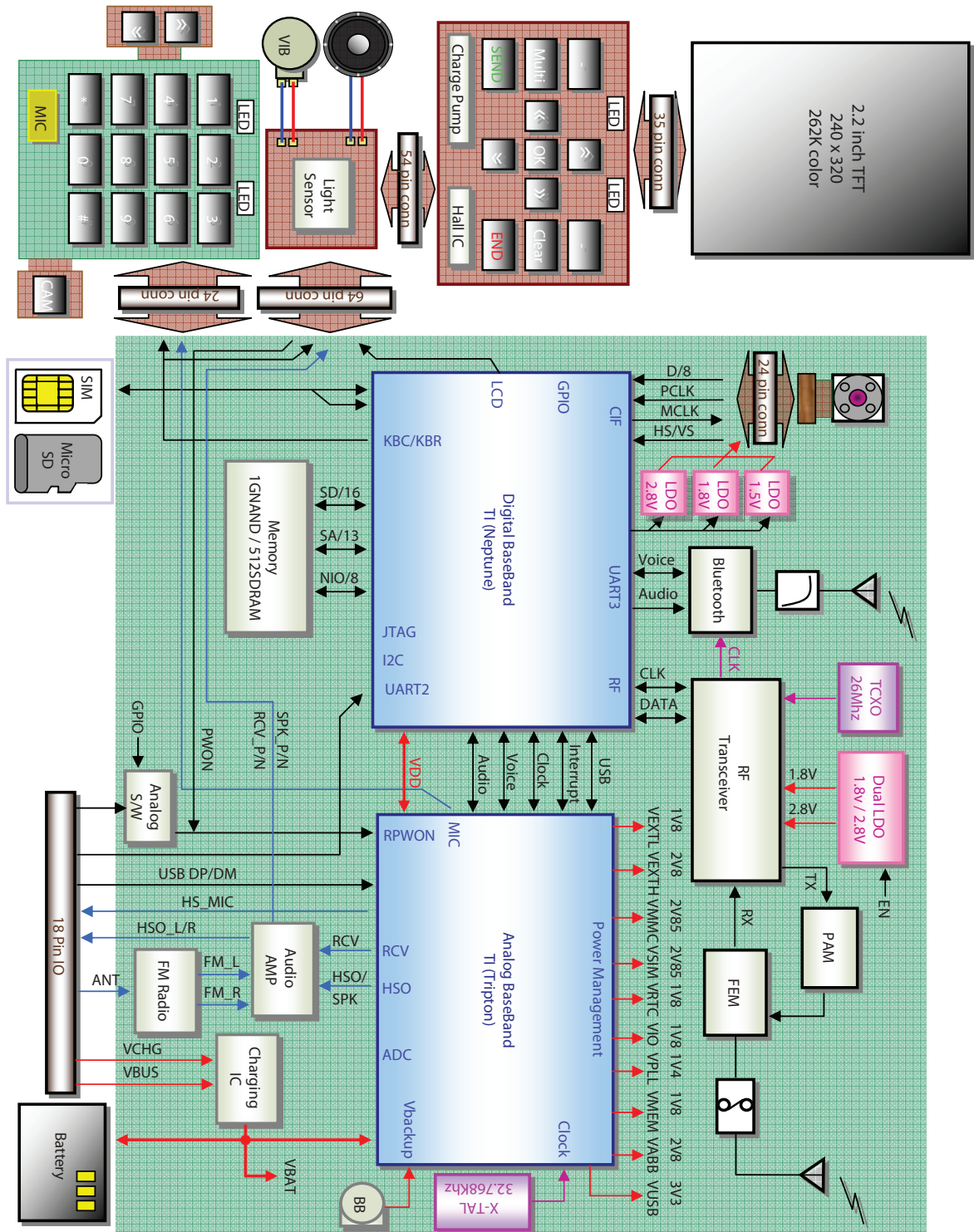
5.1.2.2.1. Preparation

- Target Handset (GD330)
- PIF
- RS-232 Cable and PIF-to-Phone interface Cable
- Power Supply or Battery

5.1.2.2.2. IBM compatible PC supporting RS-232 with Windows 98 or newer

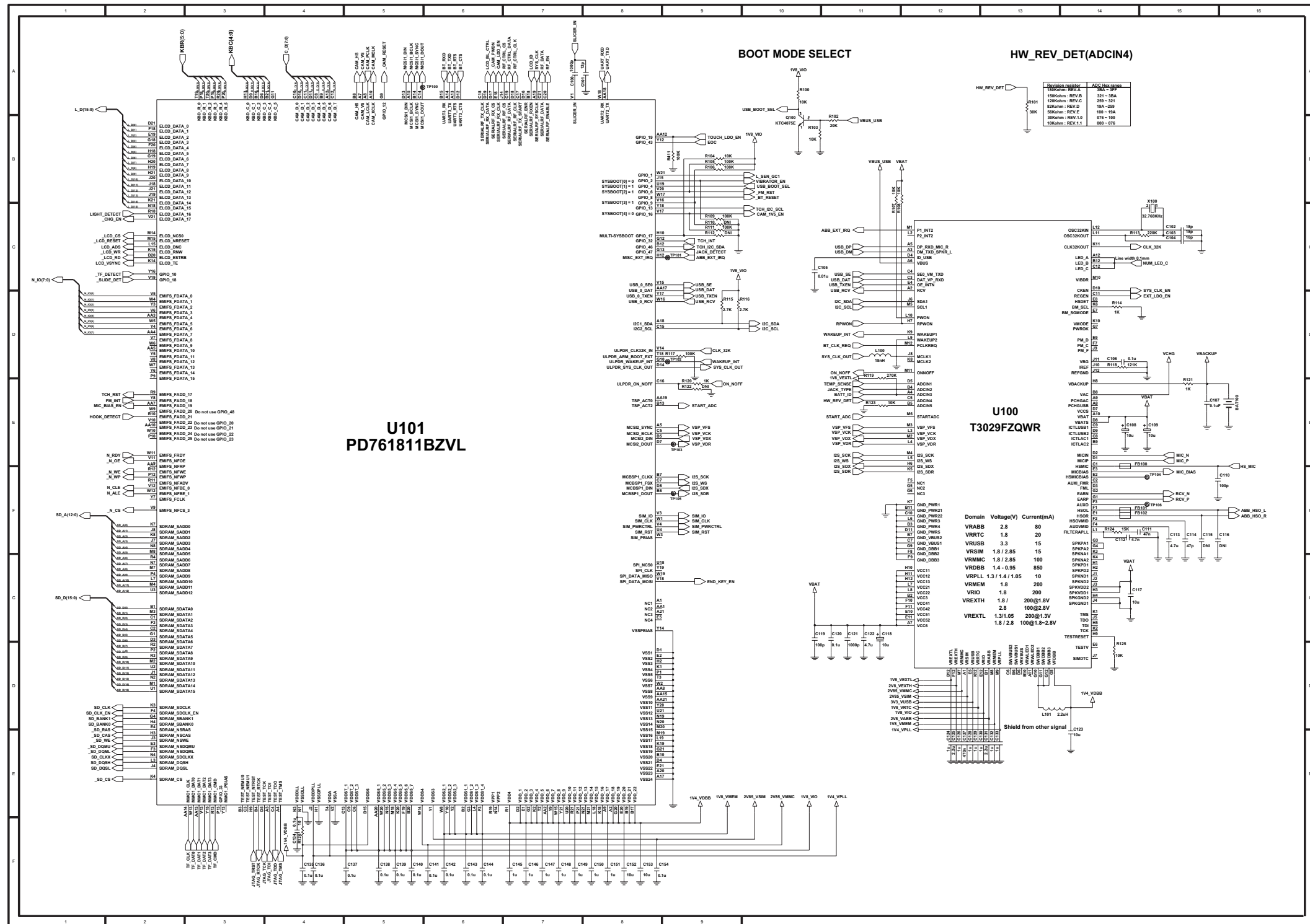
If you use battery, you should have a battery with the voltage above 3.7V.

6. BLOCK DIAGRAM

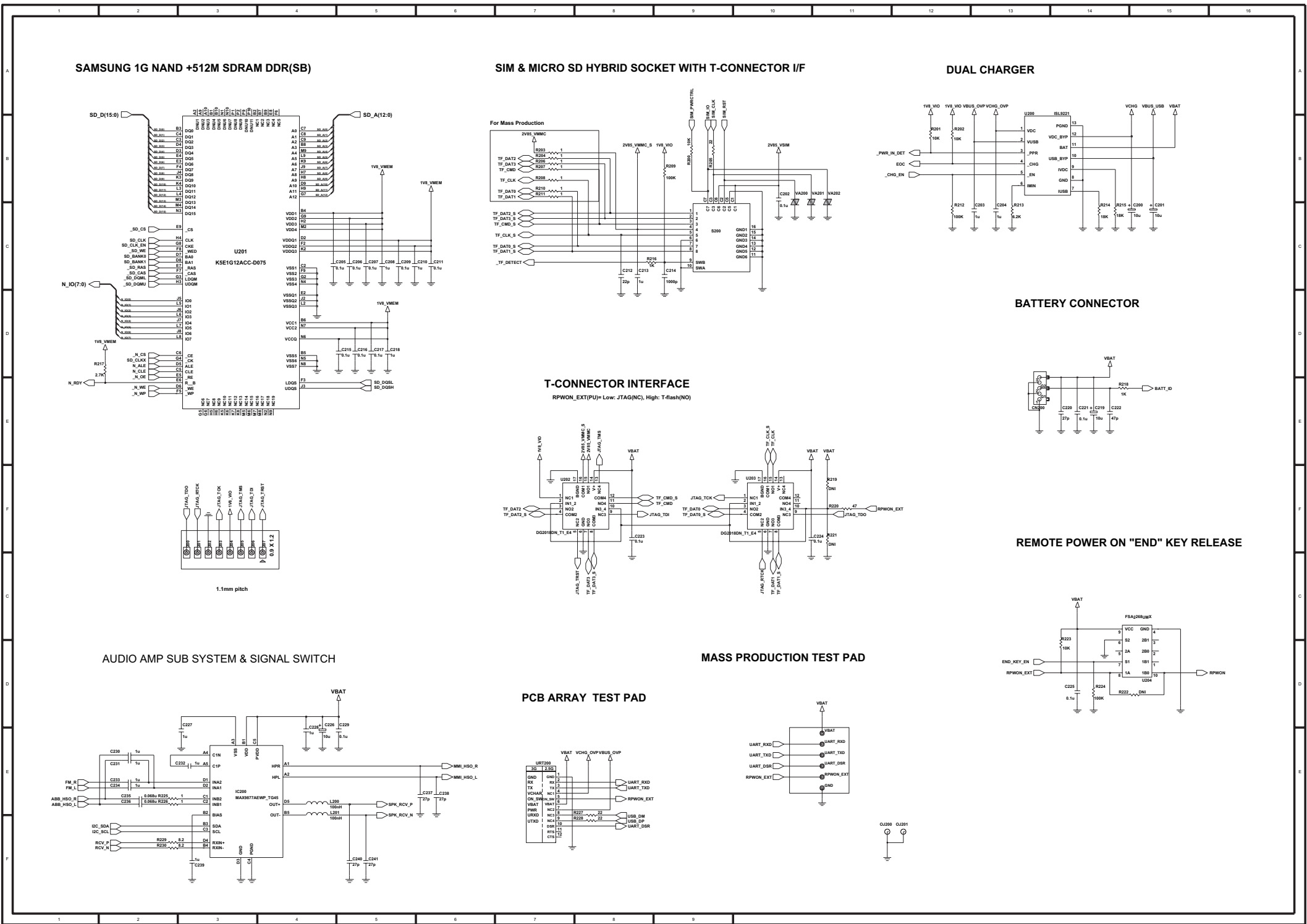




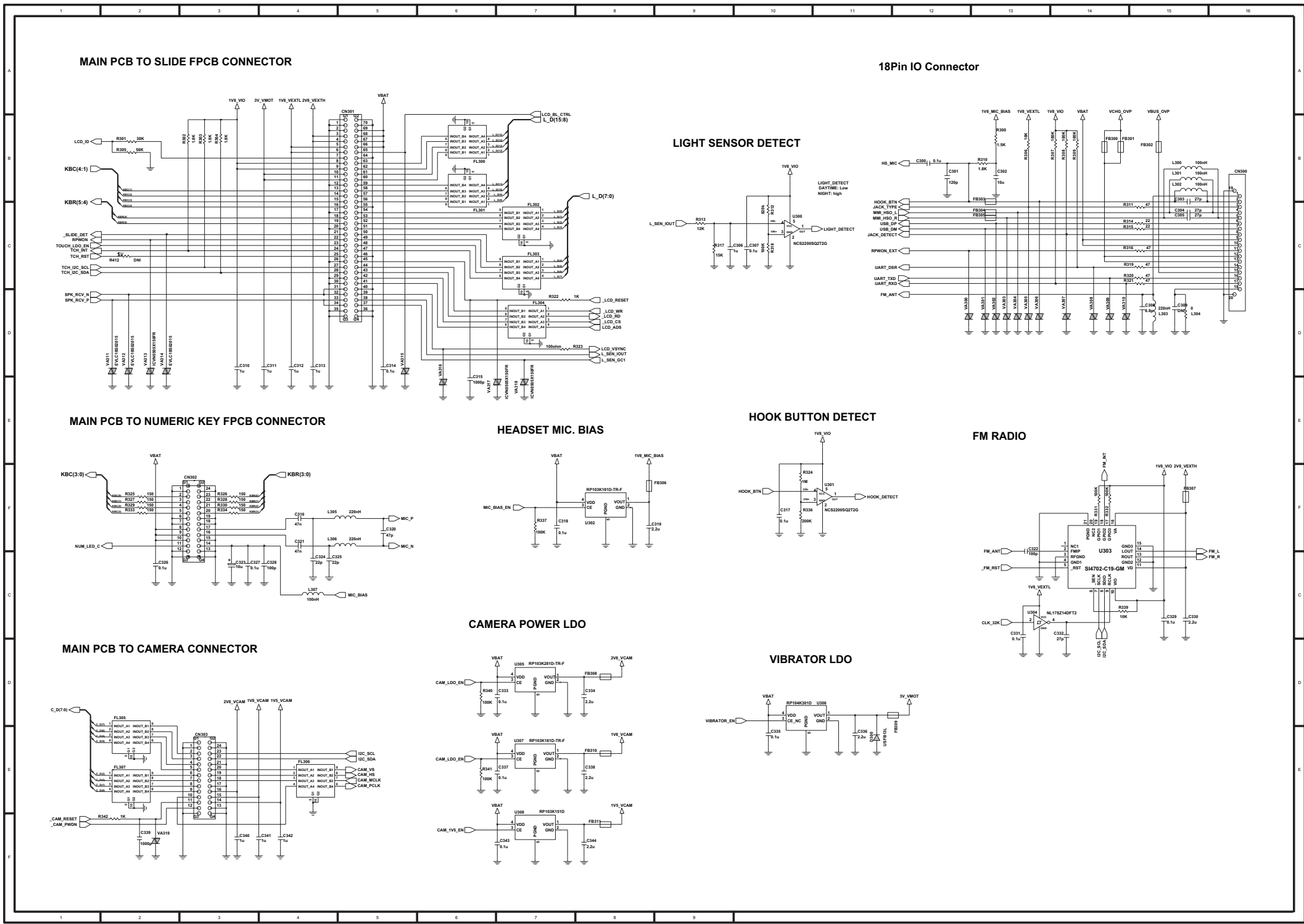
7. CIRCUIT DIAGRAM



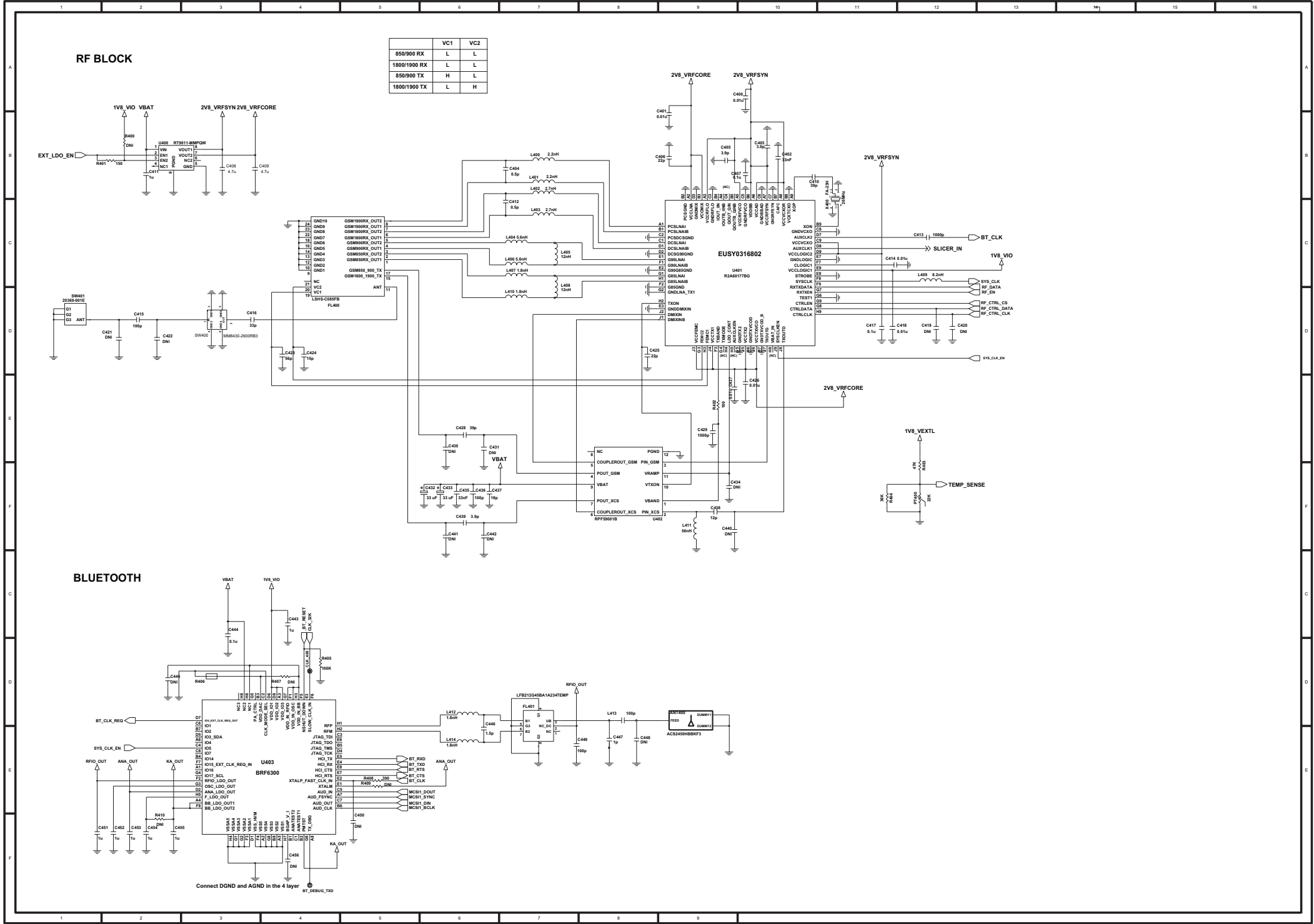
7. CIRCUIT DIAGRAM



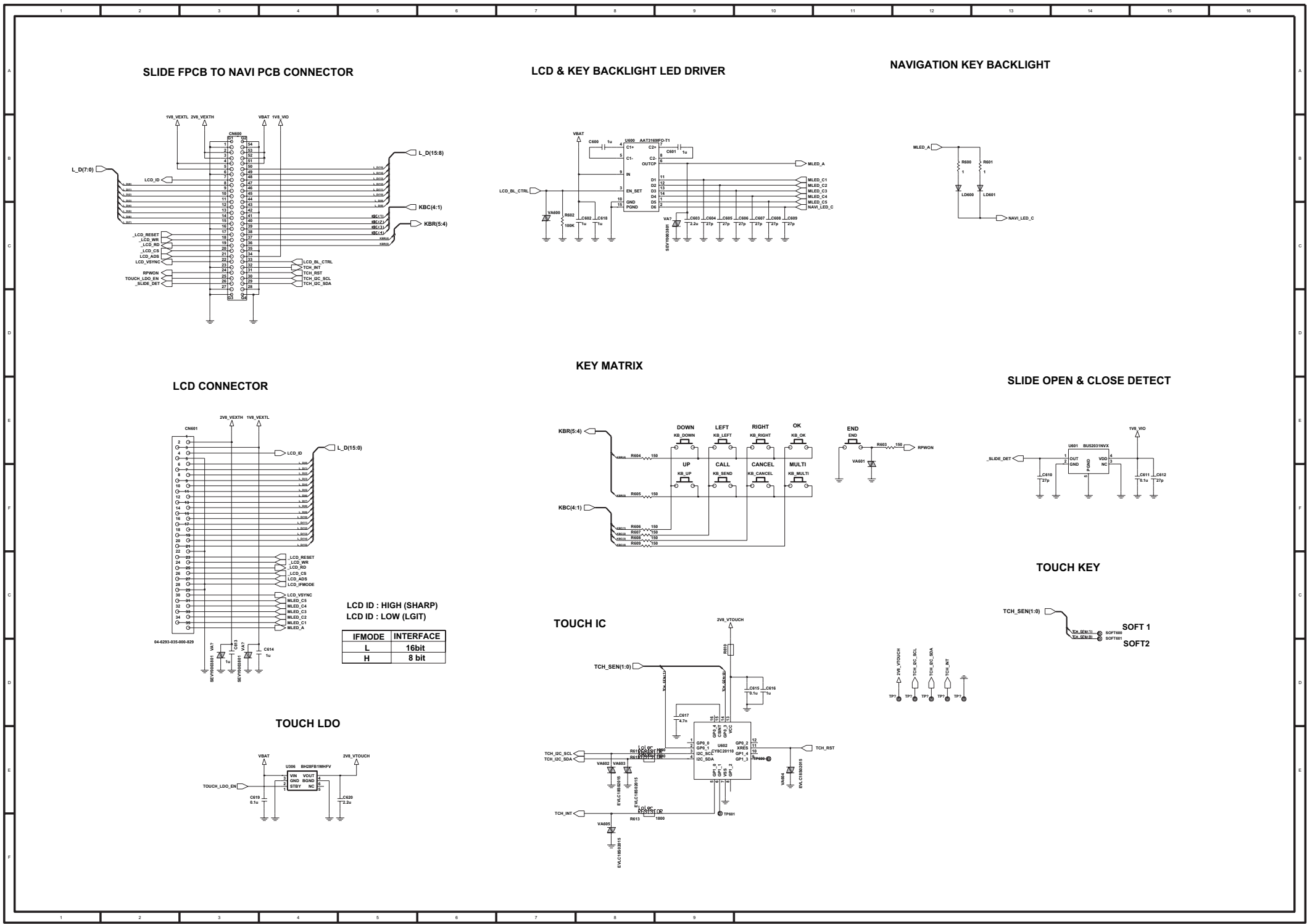
7. CIRCUIT DIAGRAM



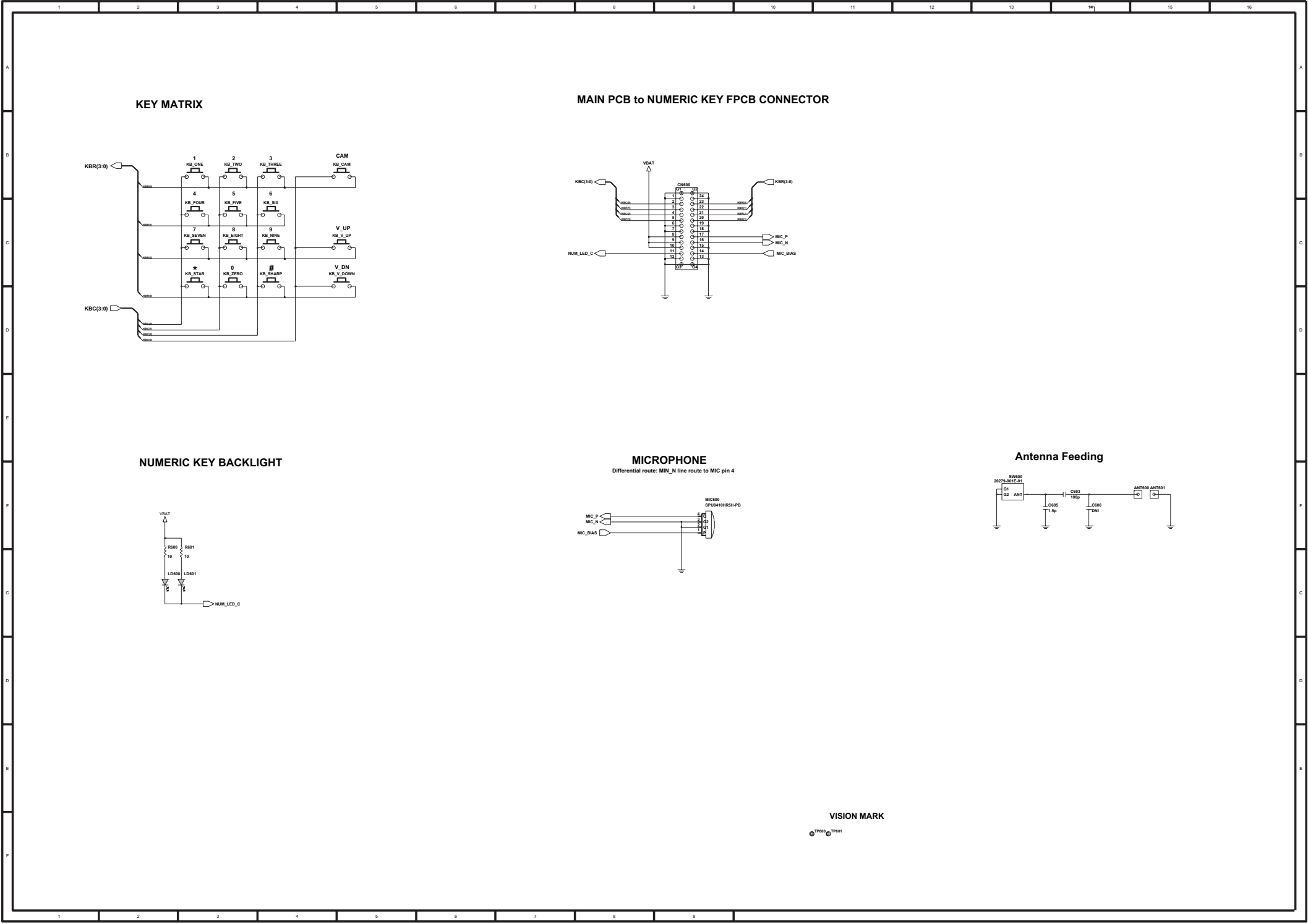
7. CIRCUIT DIAGRAM



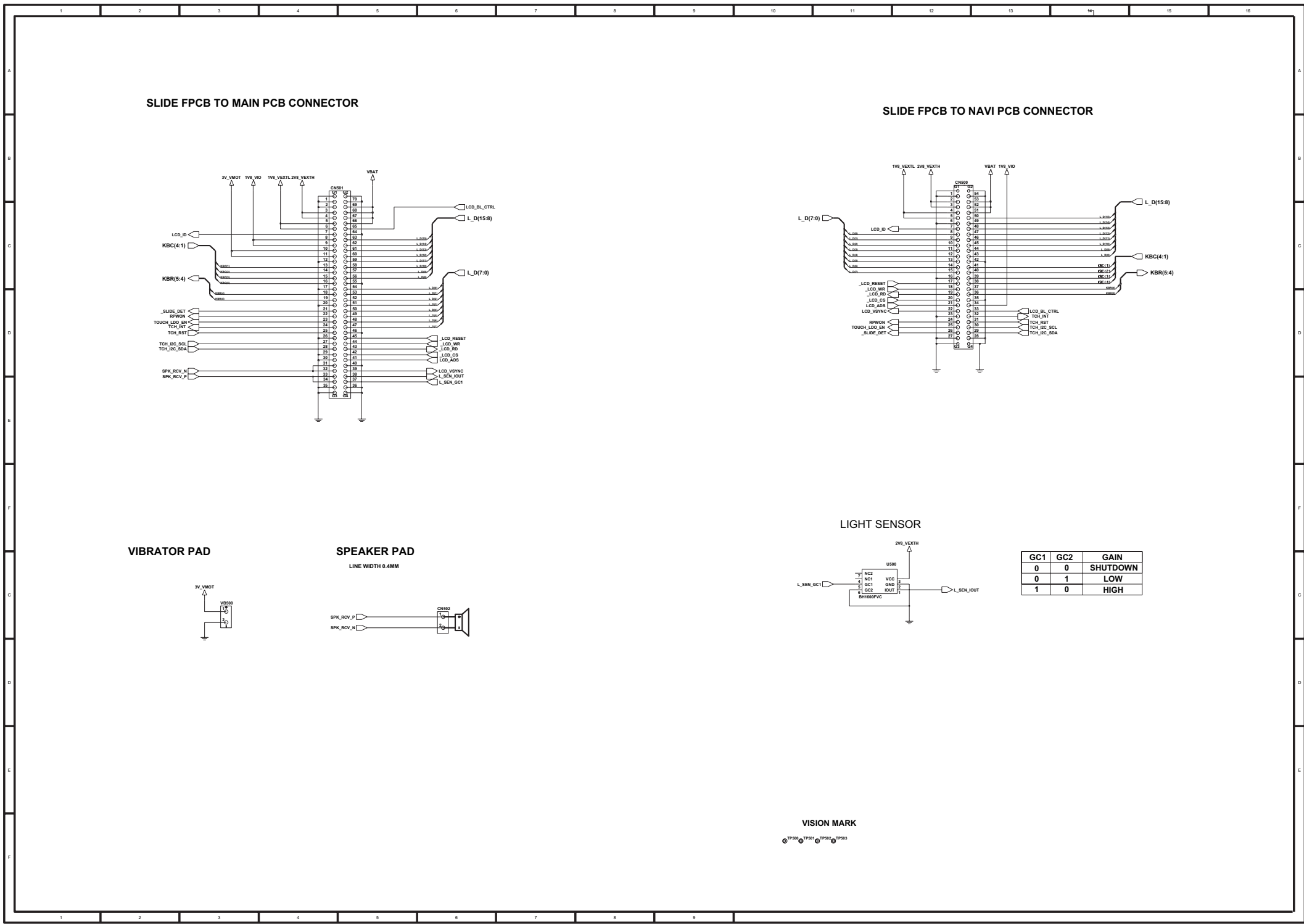
7. CIRCUIT DIAGRAM



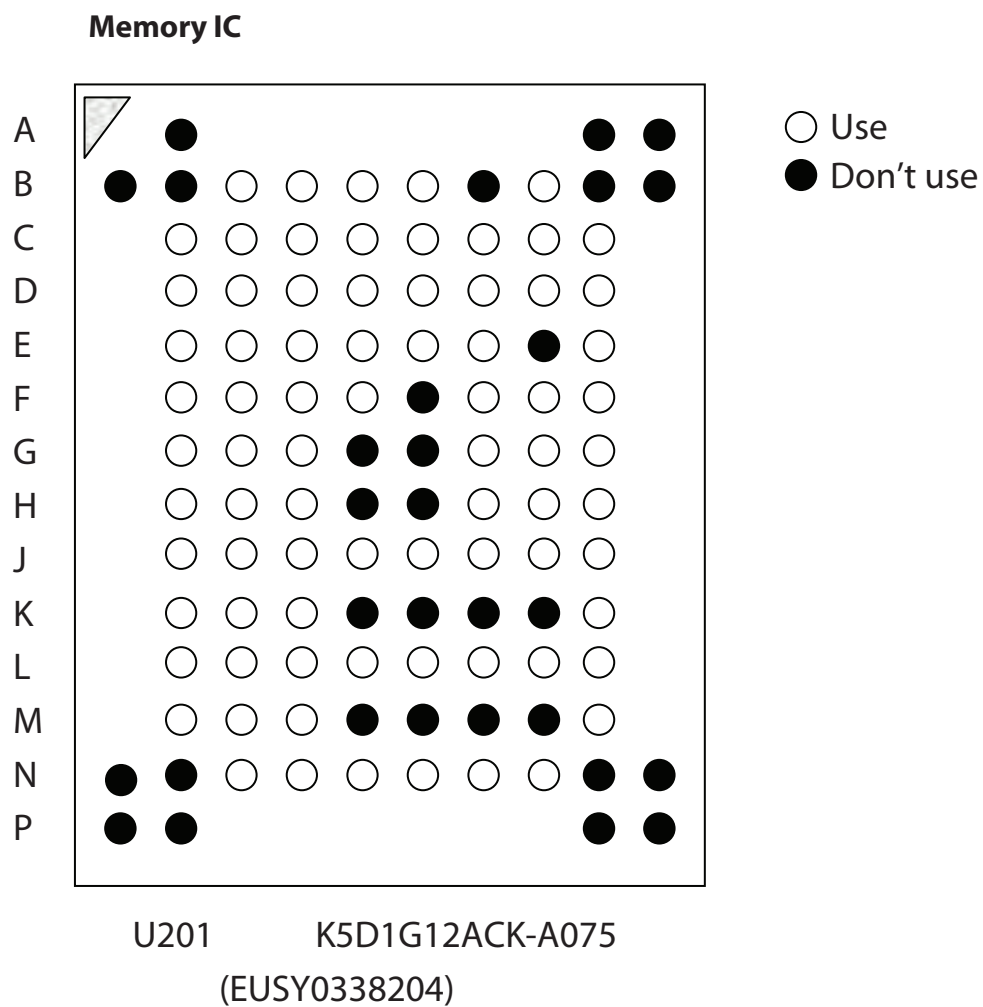
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



8. BGA Pin Map



8. BGA Pin Map

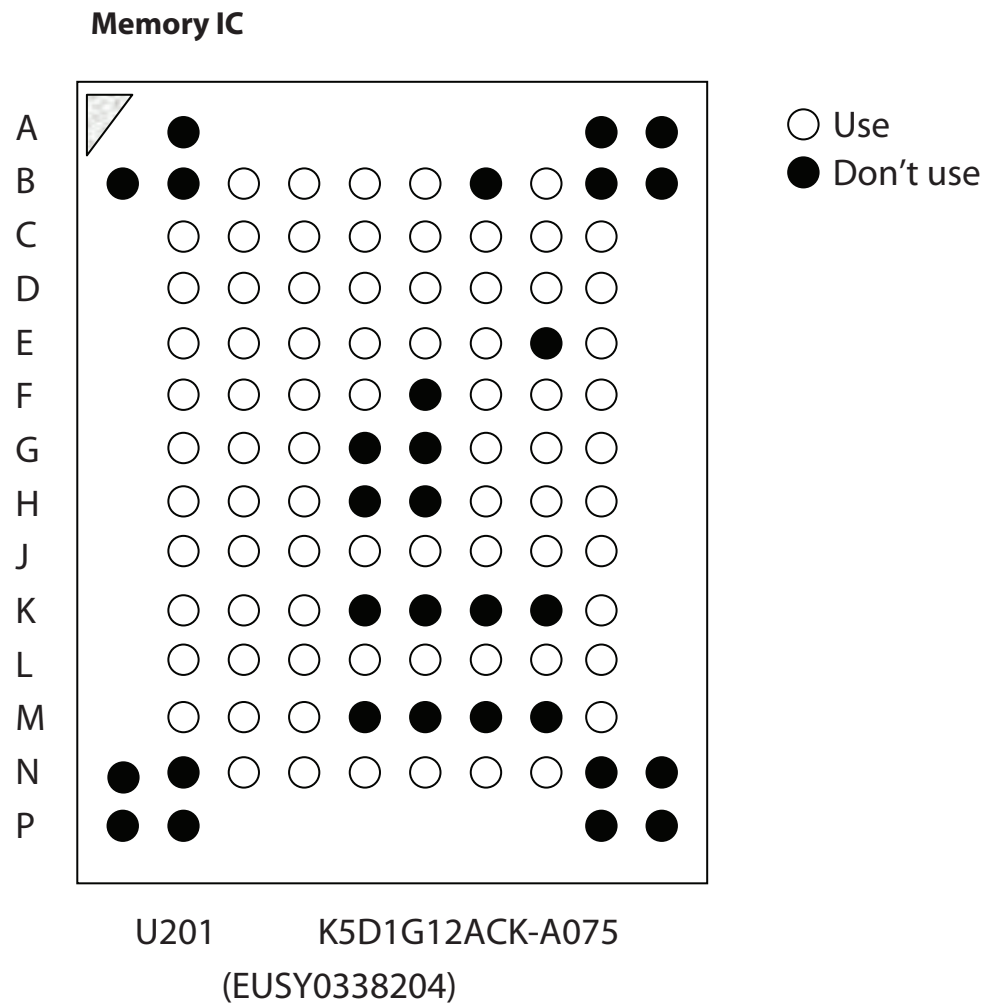


ABB (Analog Baseband)

	1	2	3	4	5	6	7	8	9	10	11	12	
M	○	○	○	○	○	○	○	○	○	○	●	○	○
L	○	●	○	○	○	○	○	○	○	○	○	○	○
K	●	●	○	○	○	○	○	○	●	○	●	○	○
J	●	●	○	○	●	○	○	○	○	○	○	○	○
I	○	○	○	○	○	○	○	○	○	○	○	○	○
H	●	●	○	○	●	○	○	○	○	○	○	○	○
G	○	○	○	○	●	●	●	○	○	○	○	○	○
F	○	○	○	○	●	○	●	○	○	○	○	○	○
E	○	○	○	○	○	●	●	●	●	○	○	○	○
D	○	○	●	○	○	●	●	○	○	○	○	○	○
C	○	●	○	○	○	●	○	○	○	○	○	○	○
B	○	○	○	○	○	○	○	○	○	○	○	○	○
A	○	○	○	○	○	○	○	○	○	○	○	○	○

○ Use

● Don't use

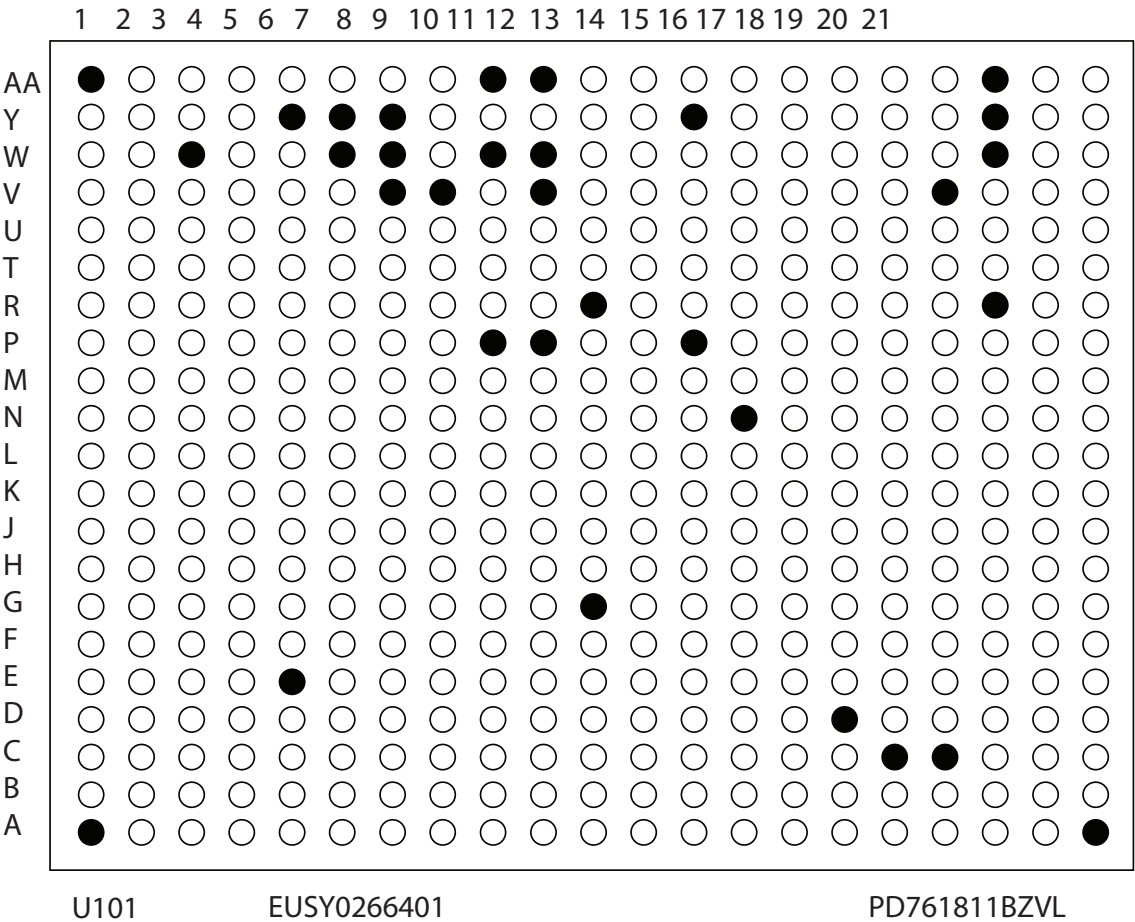
U100

EUSY0266502

T3029FZQWR

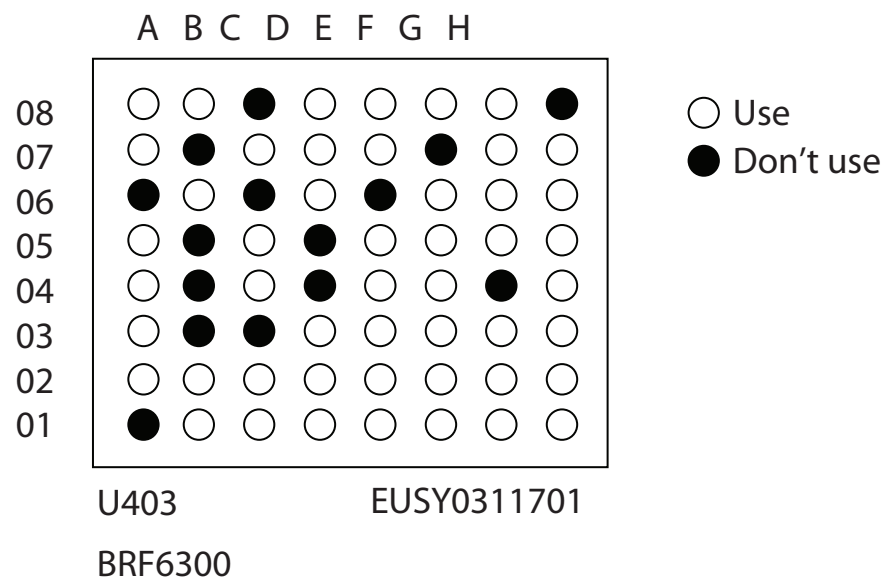
8. BGA Pin Map

DBB (Digital Baseband)

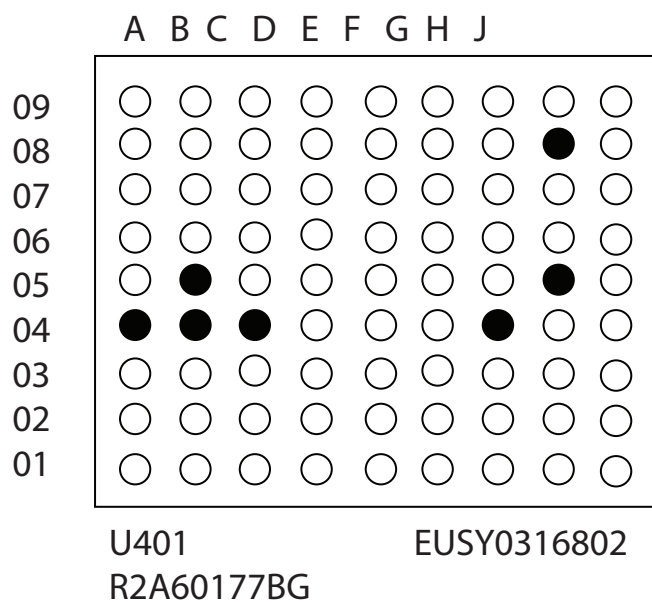


○ Use
● Don't use

Bluetooth IC

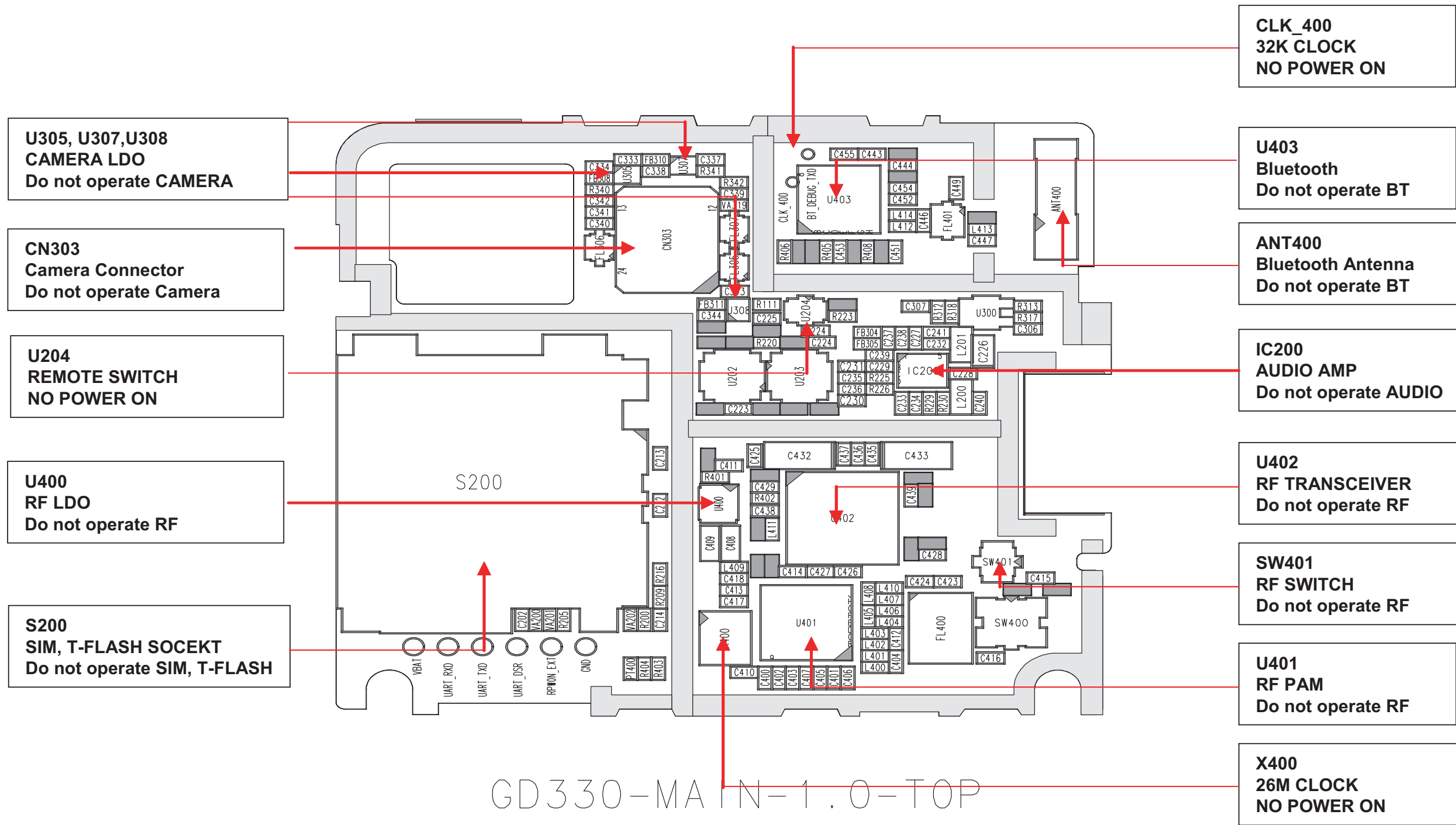


Transceiver

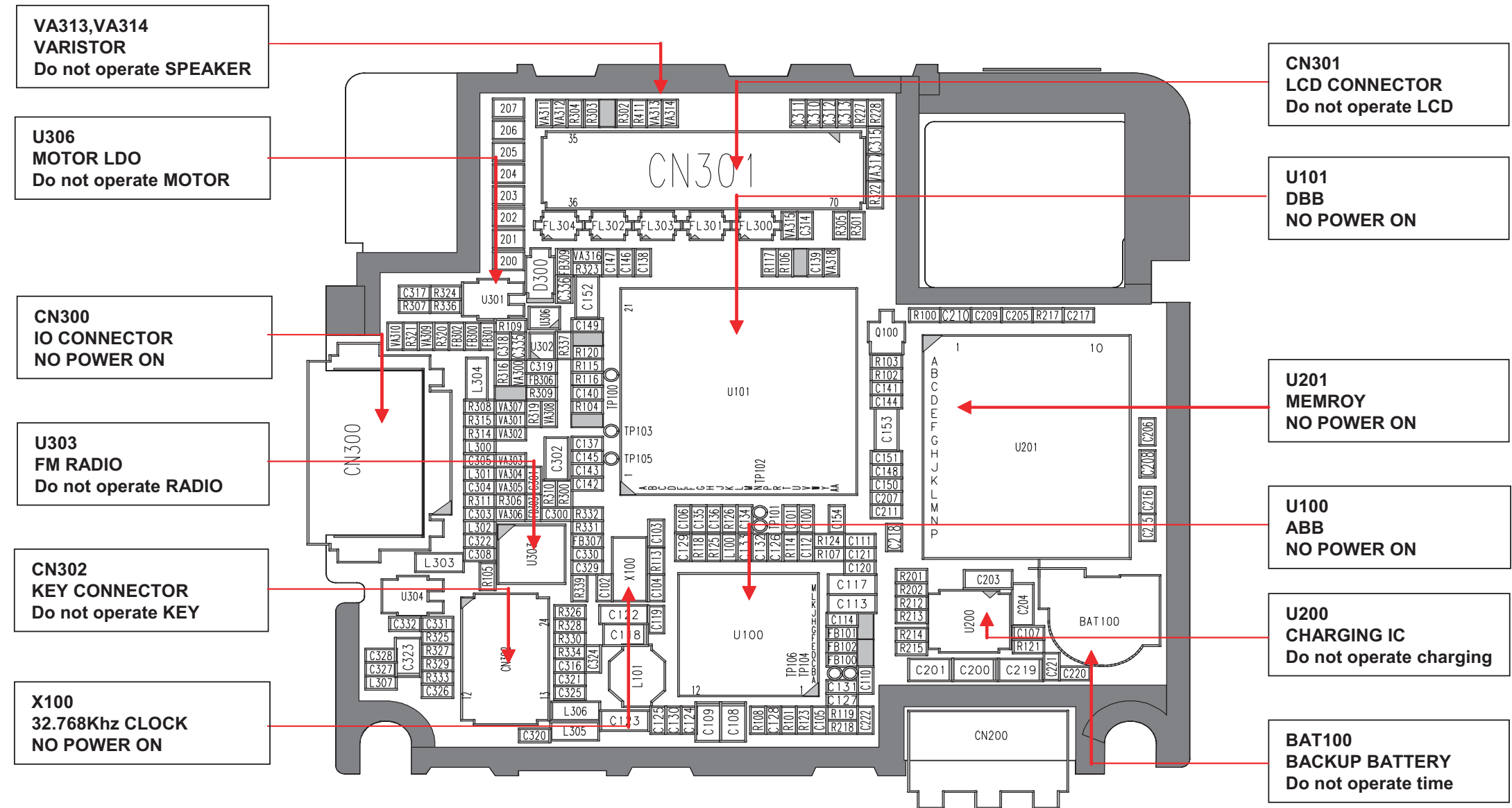




9. PCB LAYOUT

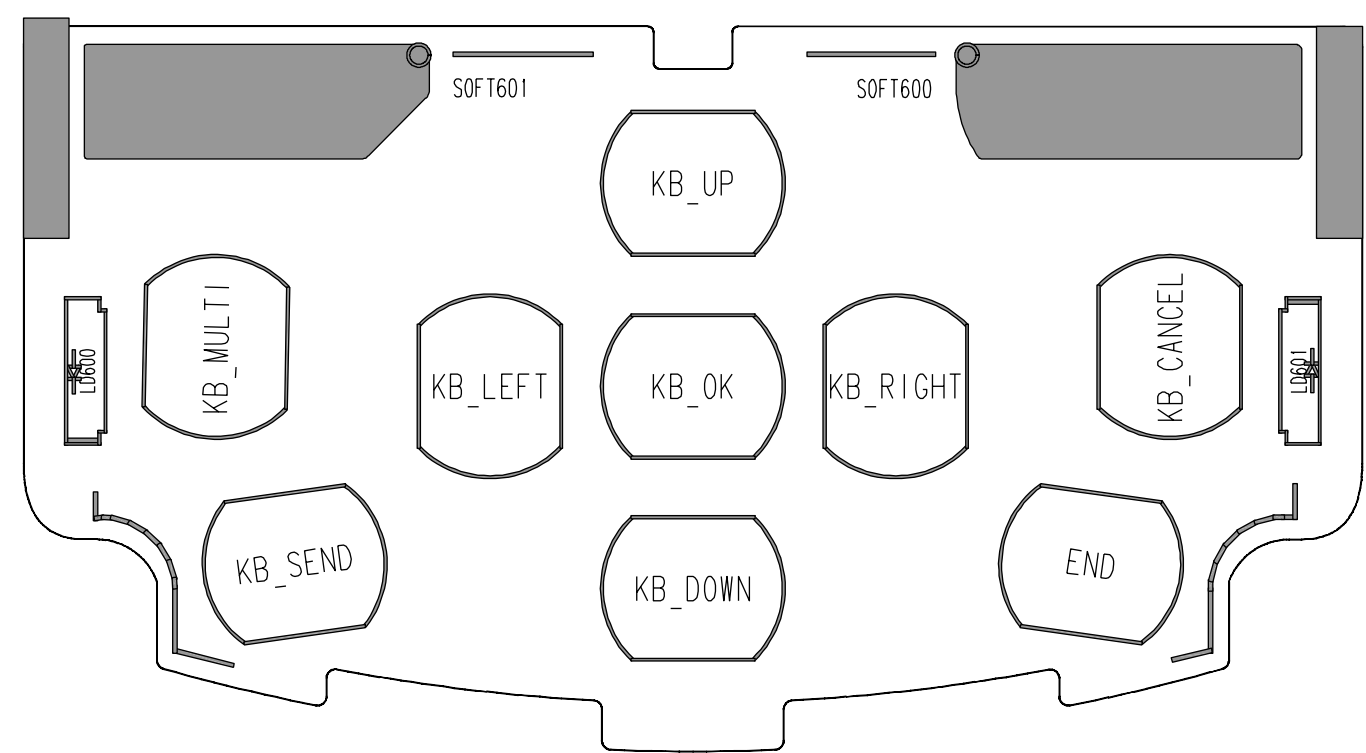


9. PCB LAYOUT



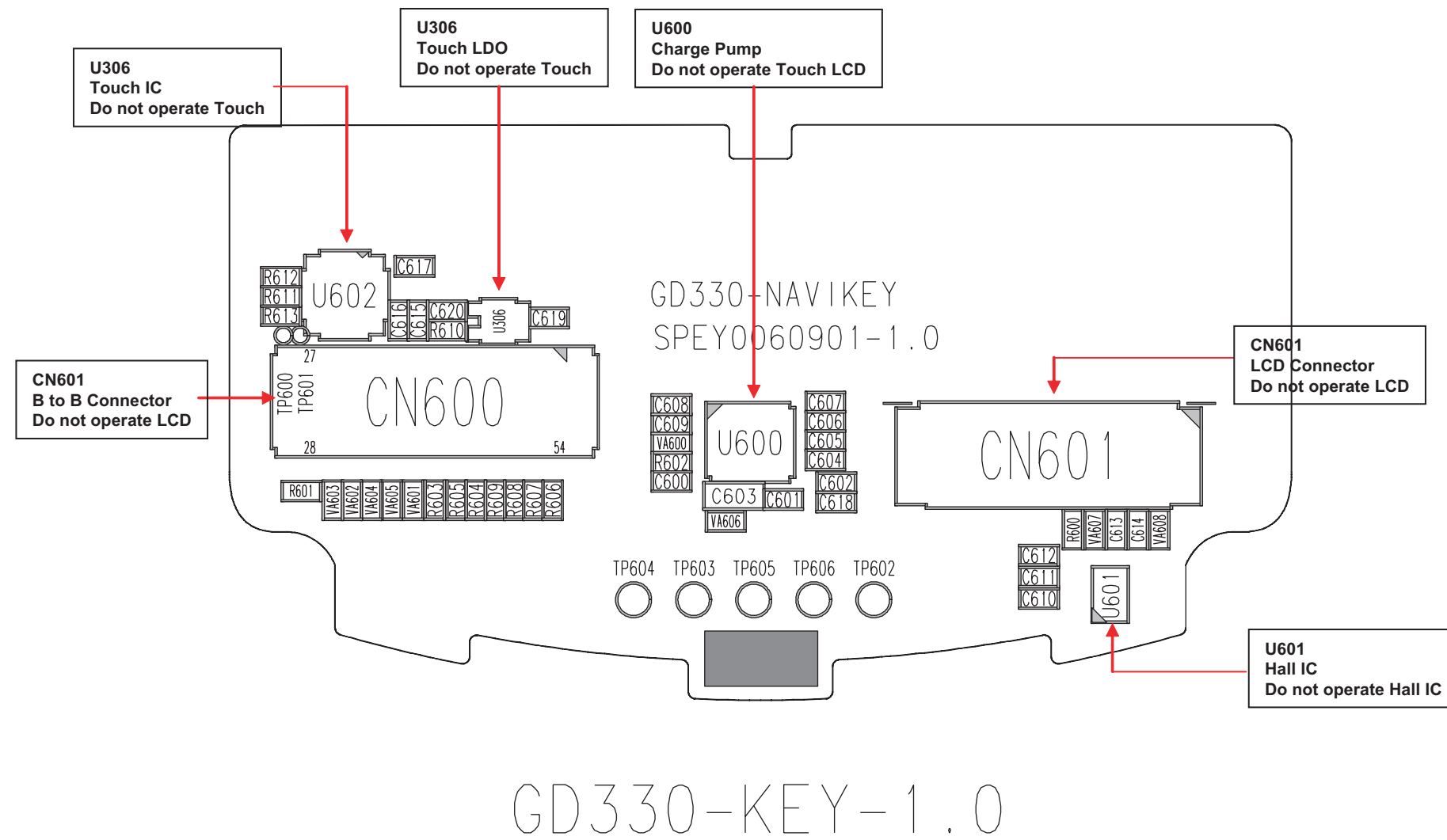
GD330-MAIN-1.0-BOT

9. PCB LAYOUT

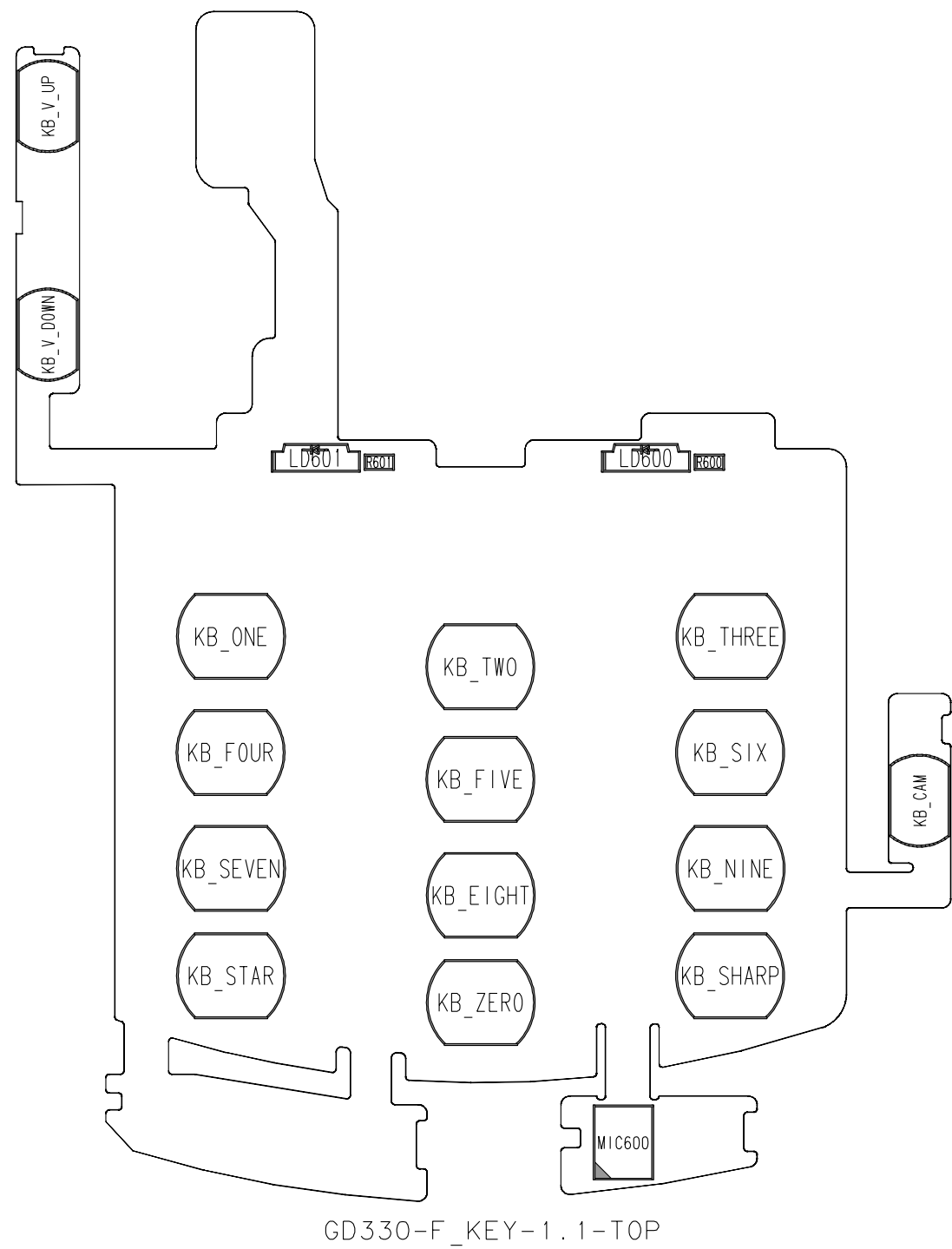


GD330-KEY-1.0

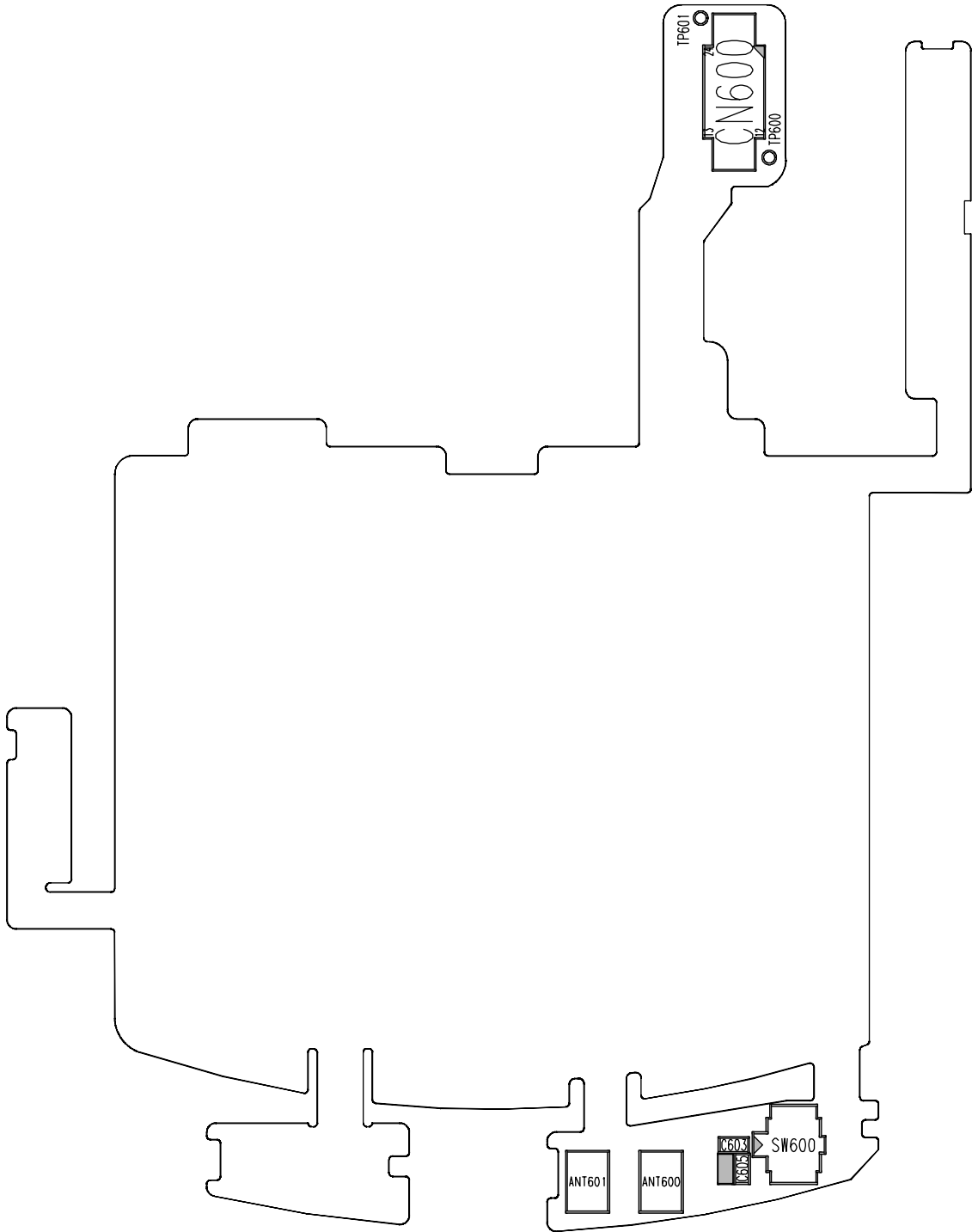
9. PCB LAYOUT



9. PCB LAYOUT

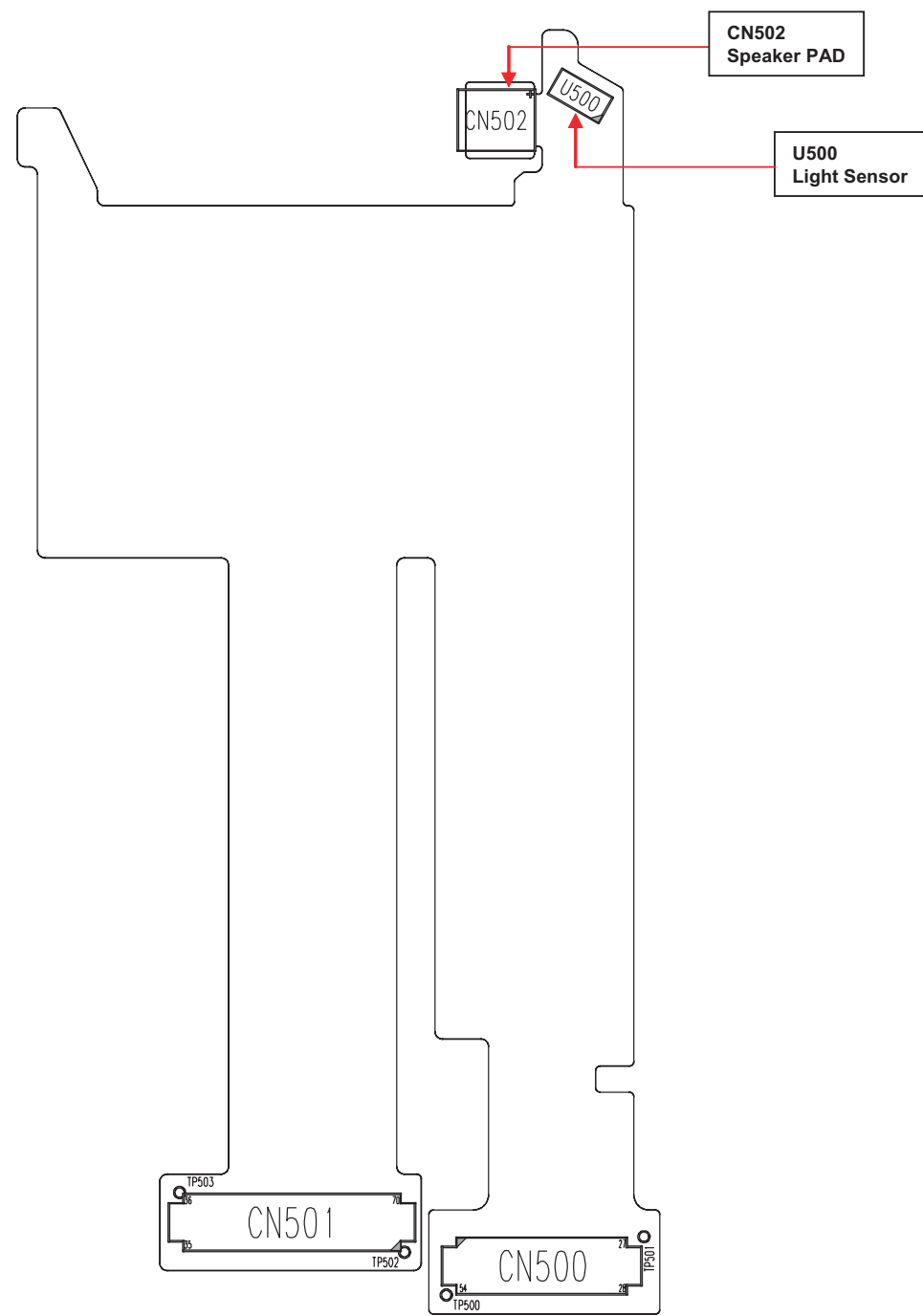


9. PCB LAYOUT



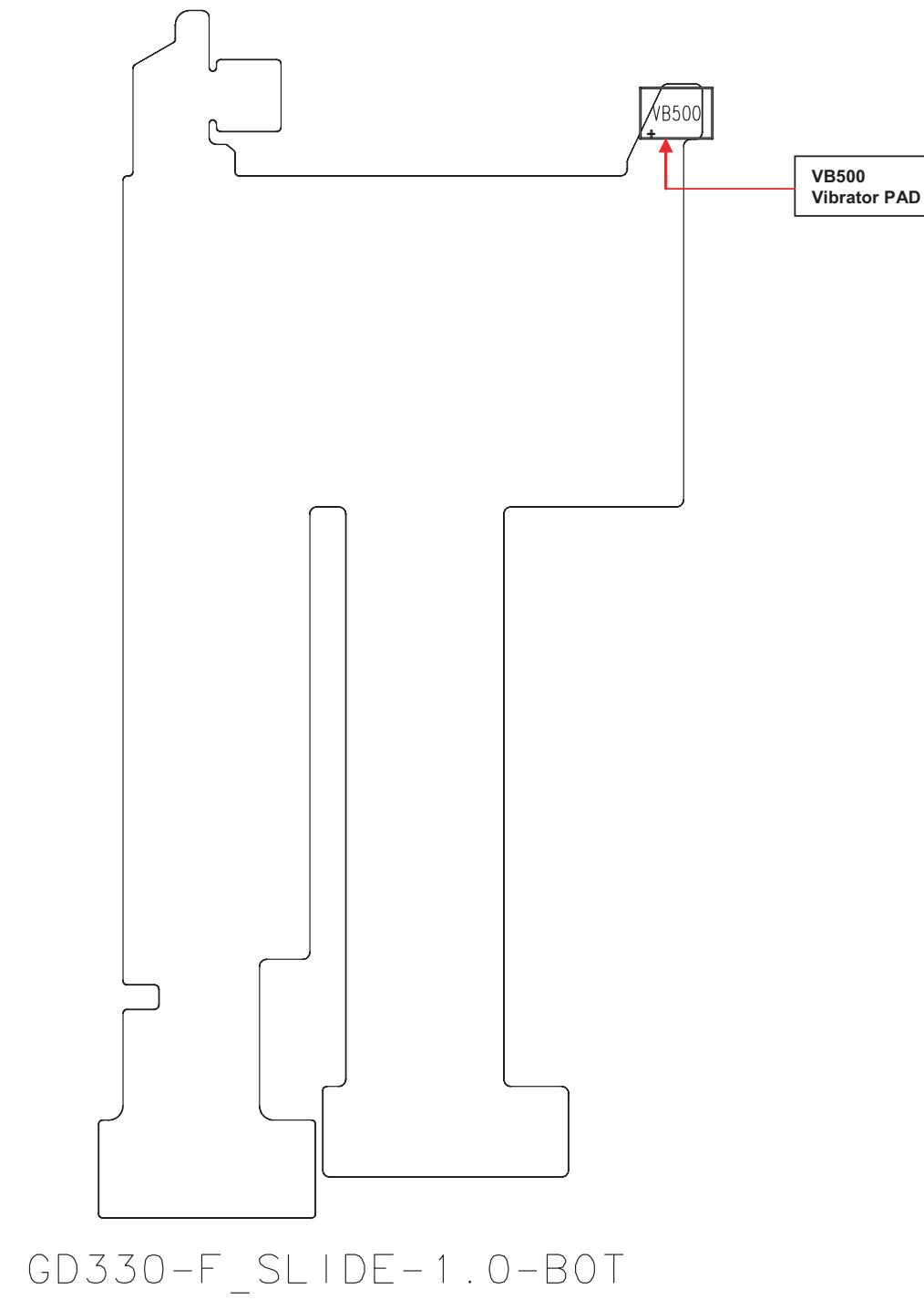
GD330-F_KEY-1.1-B0T

9. PCB LAYOUT



GD330-F_SLIDE-1.0-TOP

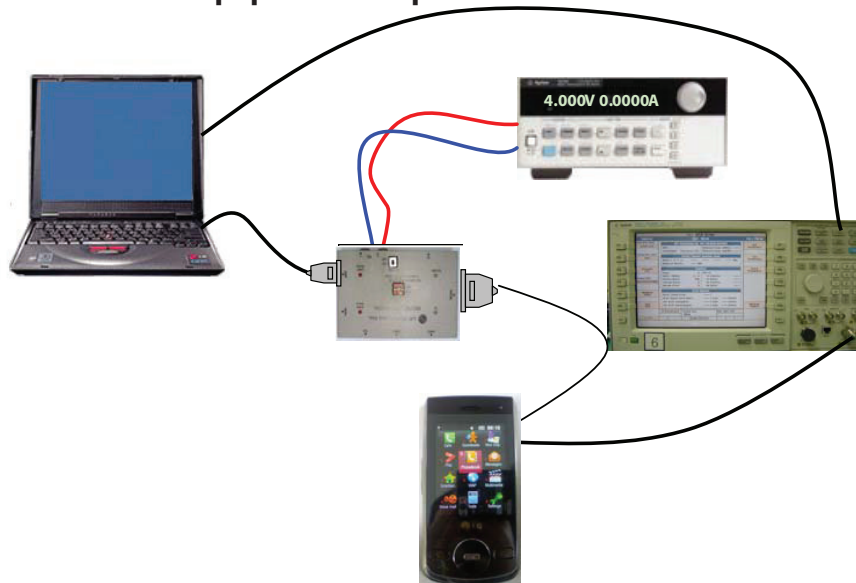
9. PCB LAYOUT



10. Calibration

10.1. Calibration

10.1.1. Calibration Equipment Setup

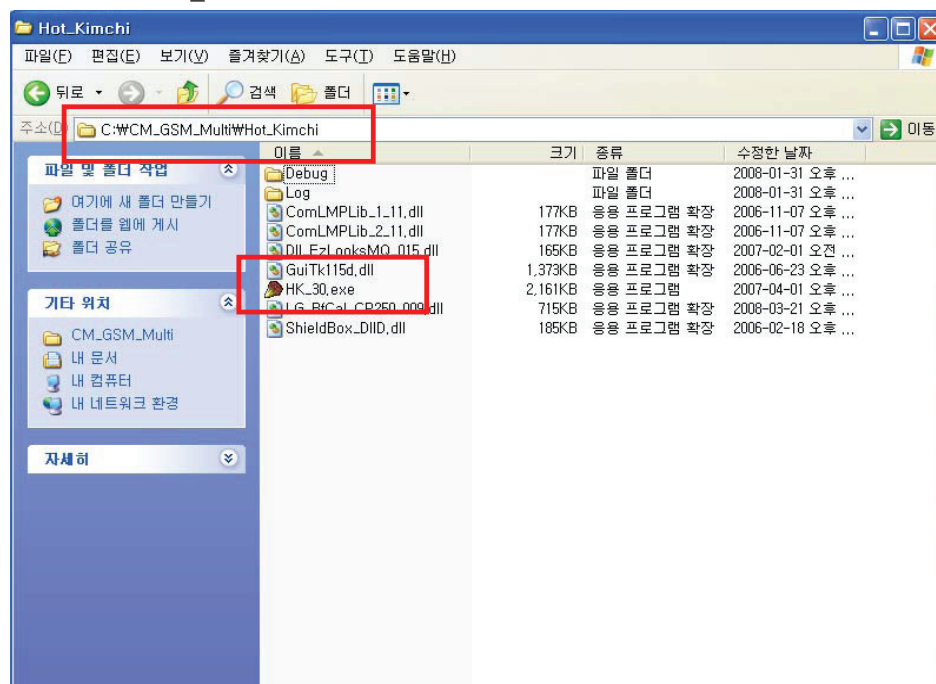


10.1.2. Calibration Steps

10.1.2.1. Turn on the Phone.

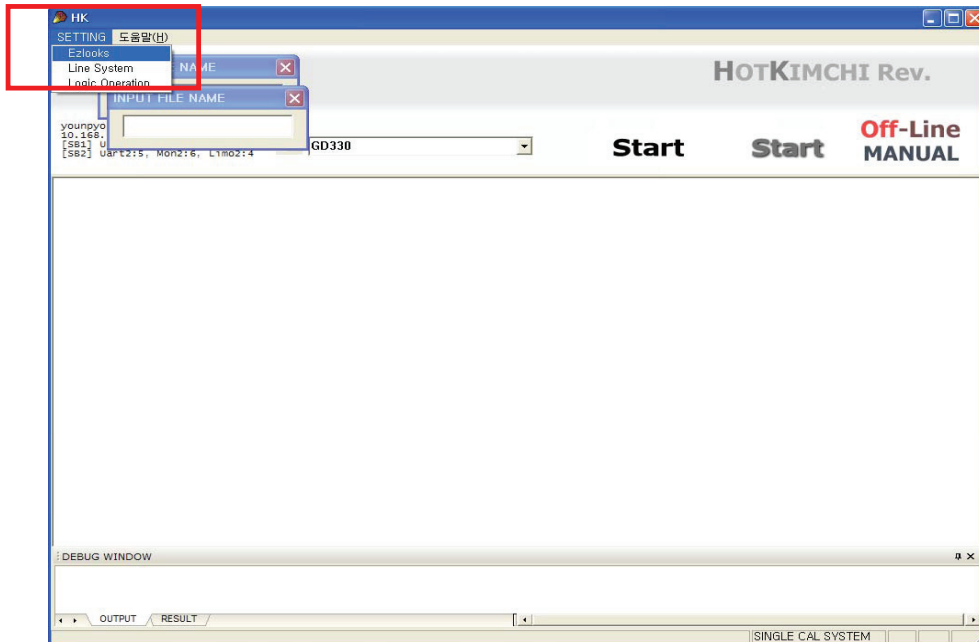
10.1.2.2. Find the hotkimchi folder from computer

10.1.2.3 Execute "HK_36.exe"

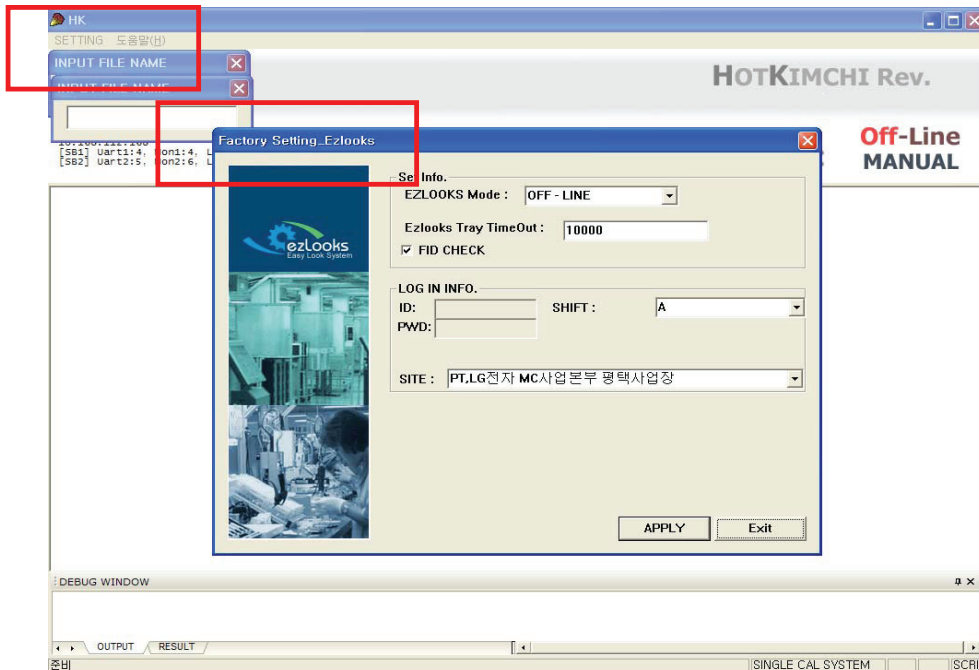


10. Calibration

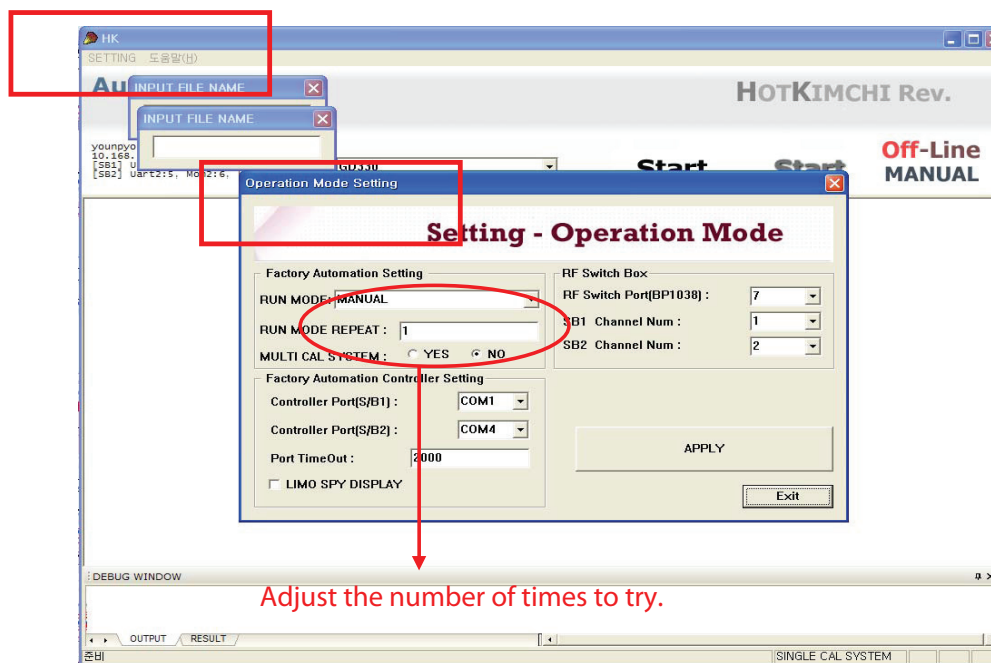
10.1.2.4. Click "SETTING" from Menu bar



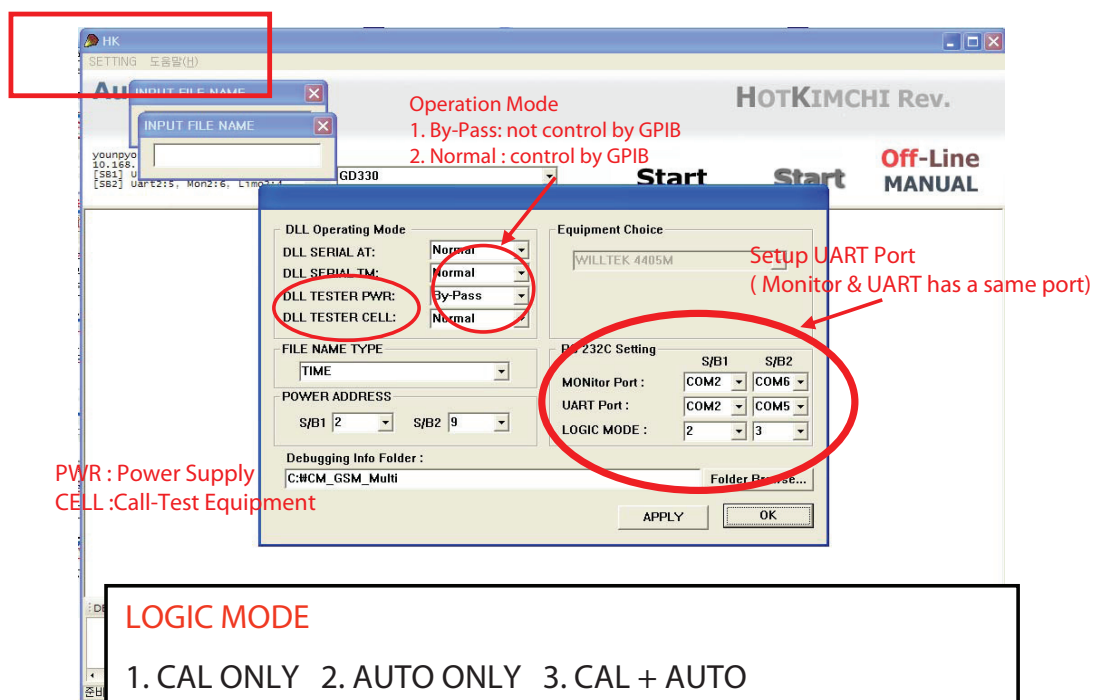
10.1.2.5. Setup "Ezlooks" menu such as the following figure



10.1.2.6 Setup "Line System" menu such as the following figure



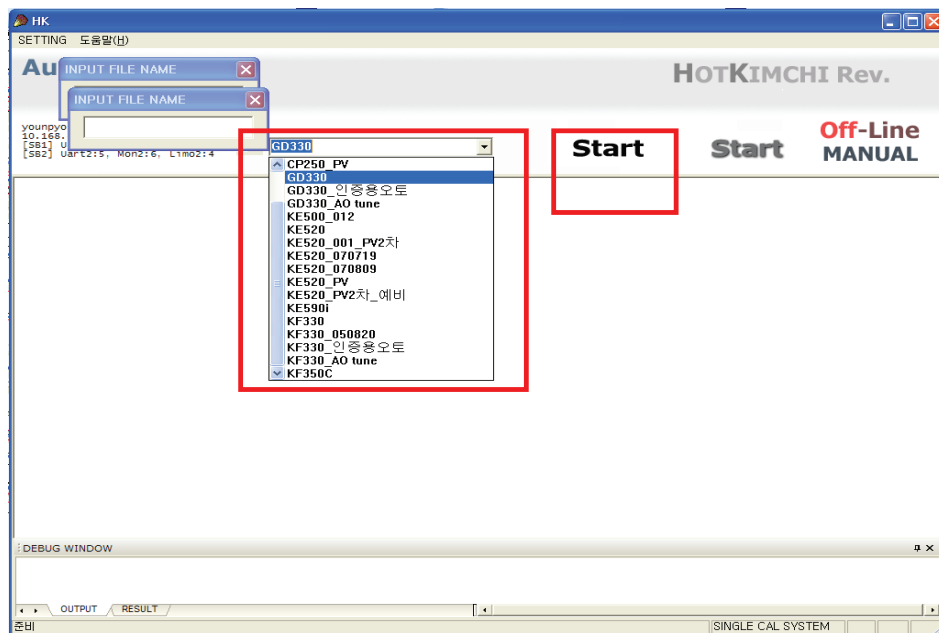
10.1.2.7 Setup "Logic operation" such as the following figure.



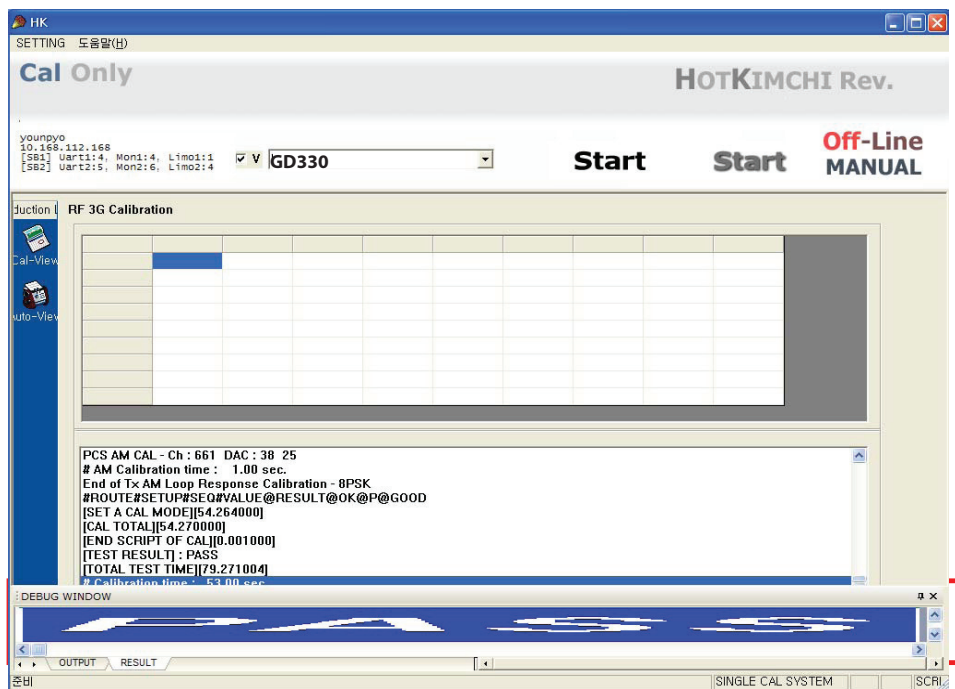
10. Calibration

10.1.2.8 Select "MODEL GD330".

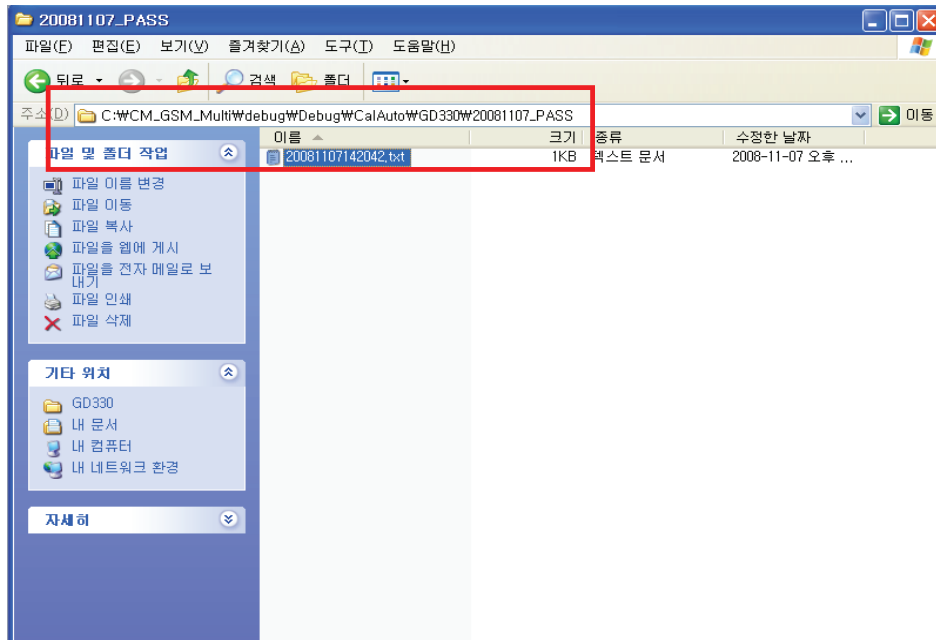
10.1.2.9 Click "START" for RF calibration



10.1.2.10 RF Calibration finishes.



10.1.2.11 Calibration data will be saved to the following folder.



10.1.3. Calibration program - HOT_KIMCHI

10.1.3.1 Calibration Program (HOT_KIMCHI)

- Under windows 2k or XP
- PIF JIG Support Agilent 8960 Test Set

10.1.3.2 Required Equipments

- Test PC with PCMCIA slot
- GPIB card
- E5515C(Agilent 8960 series)
- Power supply

11. Test Mode

11. Test Mode

1. Device Test

1.1 Function Test

Key Press Test(Press OK to exit), Vibrator Test, Sound Test → 2M Camera Test → 2M Video Recording Test

1.2 Main LCD

- 1.2.1 White
- 1.2.2 Red
- 1.2.3 Green
- 1.2.4 Blue
- 1.2.5 Black
- 1.2.6 Gray

Brightness of the LCD backlight is changed according to current dimming level(min:0, black → max:15, white)

Level can be changed by using Up/Down key

1.3 Sub LCD

1.4 LCD Backlight

1.4.1 ON

Brightness of LCD backlight is changed to the max level(white)

1.4.2 OFF

Brightness of LCD backlight is changed to the min level(black)

1.5 Key Backlight

1.6 Speaker

The music will come out through a speaker when ON

1.7 Vibrator

Vibrator is working when ON

1.8 Camera

Camera is working on preview mode

1.9 MicRcv

It's a loopback Test

1.10 Key Press Test

Pressed key is displayed. To escape, press an OK button

1.11 Touch Key Press Test

It counts the number how many times you press the left and right touch keys, respectively.

1.12 Video Test

2. ELT Mode

2.1 Automatic

- 2.1.1 1 Time
- 2.1.2 2 Times
- 2.1.3 3 Times
- 2.1.4 4 Times
- 2.1.5 5 Times
- 2.1.6 Infinite

2.2 Manual

- 2.2.1 LCD Backlight
- 2.2.2 Ringtones
- 2.2.3 Vibrator
- 2.2.4 Camera
- 2.2.5 Audio Loopback

3. Version

3.1 Main SW

4. Factory Reset

5. Usage Info

5.1 Call Timer

6. Eng Mode

6.1 Battery Info

6.2 Audio Tunning

- 6.2.1 Receiver
- 6.2.2 EarMic
- 6.2.3 Loud Speaker
- 6.2.4 HandsFree
- 6.2.5 Loopback Test
- 6.2.6 AQI Control
- 6.2.7 DVC Gain
- 6.2.8 Audio Info

6.3 UART Setting

- 6.3.1 Auto
- 6.3.2 Cal / Debug
- 6.3.3 AT CMD
- 6.3.4 UART Info
- 6.3.5 Set BR 460K
- 6.3.6 Set BR 115K

6.4 BT Testing

- 6.4.1 Audio Test
- 6.4.2 RF Test

7. Band Select

- 7.1 Auto
- 7.2 GSM 850
- 7.3 GSM 900
- 7.4 DCS 1800
- 7.5 PCS 1900

8. Network Info

- 8.1 Cell Env. (Idle)
- 8.2 Cell Env. (Ded)
- 8.3 Cell Environ
- 8.4 Location Info
- 8.5 Layer1 Info

9. Others

- 9.1 Bluetooth Test Menu
 - 9.1.1 SCO Enable
 - 9.1.2 SCO Disable
 - 9.1.3 Roam Enable
 - 9.1.4 Roam Disable
 - 9.1.5 Rssi Increase
 - 9.1.6 Rssi Decrease
 - 9.1.7 Battery Increase
 - 9.1.8 Battery Decrease
 - 9.1.9 BPP XHTML PRINT
 - 9.1.10 Get BT Misc version

9.2 LCD Always On_Enable

9.3 LCD Always On_Disable

9.4 FM Radio Test

- 9.4.1 OnOff Test
- 9.4.2 Tune Test
- 9.4.3 Seek Test
- 9.4.4 Volume Test

9.5 Light Sensor setting

- 9.5.1 LIGHT_SENSOR 00
- 9.5.2 LIGHT_SENSOR 01
- 9.5.3 LIGHT_SENSOR 10
- 9.5.4 LIGHT_SENSOR 11
- 9.5.5 LIGHT_Detect

9.6 Sound Contents Test

9.7 Trace

9.7.1 Trace On/Off

9.7.2 FakeLanguage On/Off

9.8 Touch

9.9 TouchRomWrite

9.10 LM Tunning

9.11 Audio Standard

9.11.1 Handset

9.11.2 Headset

9.11.3 Speaker Phone

9.11.4 Bluetooth headset

9.11.5 Info

9.11.6 Default



12. EXPLODED VIEW & REPLACEMENT PART LIST

12.1 EXPLODED VIEW

Diagram illustrating the exploded view of the mobile phone assembly, showing various components and their assembly order. The components are labeled with numbers 1 through 64, corresponding to the parts list.

Key assembly areas labeled include:

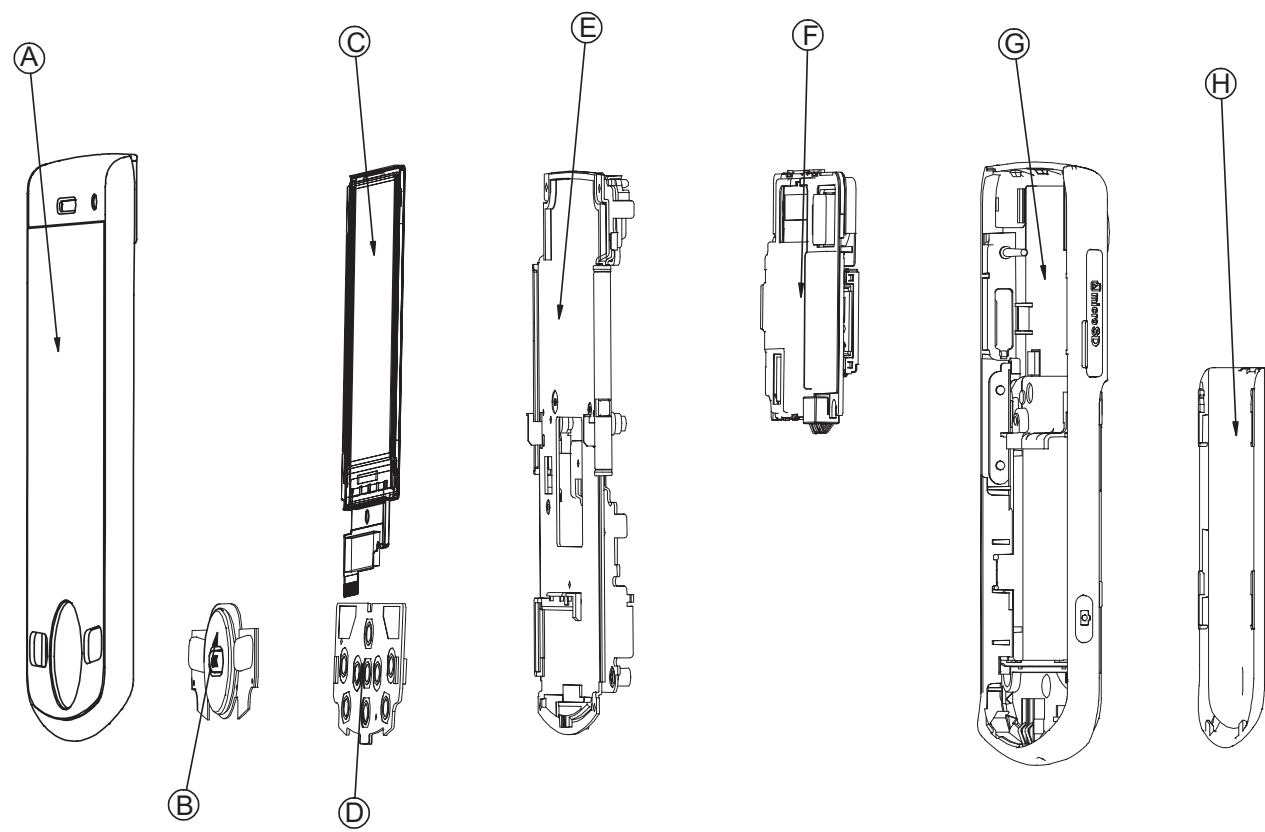
- Cover Assy Upper
- Cover Assy Slide
- Cover Assy Front
- Cover Assy Rear

47	SCREW MACHINE	4	GMEY0011201	
46	COVER, BATTERY	1	MCJA0068301	
45	DECO CAMERA	1	MDAD0042101	
44	CAMERA, WINDOW	1	MWAE0037901	
43	CAMERA, TAPE	1	MTAK0021501	
42	CAP, SD	1	MCCG0014201	
41	TAPE PROTECTION(CAMERA)	1	MTAB0289601	
40	BUTTON, SIDE(CAMERA)	1	MBJL0062401	
39	COVER, REAR	1	MCJN0087901	
38	MIKE, PAD	1	MPBH0044501	
37	PAD CAMERA CONN	1	MPBU0057101	
36	CAP, MMI	1	MCCC0057301	
35	BUTTON, SIDE(VOLUME)	1	MBJL0062301	
34	TAPE PROTECTION(VOLUME)	1	MTAB0289501	
33	PAD	1	MPBU0057201	
32	CAMERA, PAD	1	MPBT0072001	
31	INSULATOR WIRE	1	MIDZ0198601	
30	ANTENNA	1	SNCF0038102	
29	SHIELD, CAN(TOP)	1	MGBA0036101	
28	PCB, ASSY MAIN	1	SACY0304601	
27	SHIELD, CAN(BOT)	1	ACKA0013401	
26	CAP, SCREW R	1	MCCH0133401	
25	CAP, SCREW L	1	MCCH0137701	
24	SCREW MACHINE	2	GMEY0013801	
23	RAIL, ASSY	1	ARDY0009201	
22	FPCB, ASSY KEY	1	SACY0085101	
21	PAD MIC	1	MPBH0044601	
20	DOME ASSY METAL(MAIN)	1	ADCA0065801	
19	MAIN, BUTTON ASSY	1	ABGF0005701	
18	DECO, FRONT	1	MDAG0039201	
17	LCD, ASSY	1	SVLM0026901	
16	PCB ASSY SUB	1	SACY0066201	
15	DOME ASSY METAL(SUB)	1	ADCA0085601	
14	SLIDE, ASSY KEYPAD	1	ABGC0008401	
13	SPEAKER	1	SUSY0027203	
12	LIGHTING, SENSE PAD	1	MPBZ0225001	
11	SPEAKER, PAD	1	MPBN0068201	
10	MOTOR, TAPE	1	MTAF0025801	
9	LCD, PAD	1	MPBG0089201	
8	COVER, UPPER	1	MCJW0020501	
7	INDICATOR, LED	1	MIAA0024001	
6	LIGHTING, SENSE TAPE	1	MTAZ0229101	
5	SPEAKER MESH	1	MPBN0068401	
4	WINDOW, TAPE	1	MTAD0102001	
3	DECO, UPPER TAPE	1	MTAA0181601	
2	UPPER, DECO	1	MDAP0003701	
1	WINDOW, LCD	1	MWAC0103401	
64	CAMERA	1	SVCY0019101	
63	MAGNET	1	MMAA0000601	
62	MOTOR	1	SJMY0007104	
61	RF Cable	1	SWCC0005901	
60	INSULATOR(LCD2)	1	MIDZ0198501	
59	INSULATOR(MOTOR)	1	MIDZ0207001	
58	SCREW(3.5 BLACK)	1	GMEY0022301	
57	TAPE PROTECTION(WINDOW)	1	MTAB0302401	
56	TAPE PROTECTION(DECO, FRONT)	1	MTAB0302501	
55	INSULATOR(conn)	1	MIDZ0198401	
54	TAPE, SHIELD	1	MTAC0089301	
53	INSULATOR(D.I.)	1	MIDZ0207201	
52	PAD, FLEXIBLE	1	MPBF0040601	
51	PAD, MOTOR	1	MPBJ0061801	
50	SPK PAD	1	MPBN0072101	
49	SPK PAD(측백)	1	MPBN0072001	
48	TOUCH PAD	2	MGAD0188601	

NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
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ASS'Y EXPLODED VIEW

Assy Exploded View



H	Cover Battery	MCJA0068301
G	Cover Assy Rear	ACGM0116001
F	PCB Assy Main	SAFY0304601
E	Hinge Assy	ARDY0009201
D	PCB Assy Sub	SAEY00066201
C	LCD	SVLM0026901
B	Slide Assy Keypad	ABGG0008401
A	Cover Assy Upper	ACGS0021301
No.	Description	Drawing No

12. EXPLODED VIEW & REPLACEMENT PART LIST

12.2 Replacement Parts <Mechanic component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Description	Part Number	Spec	Color	Remark
2	AAAY00	ADDITION	AAAY0355501		BLACK	
3	MCJA00	COVER,BATTERY	MCJA0068301	MOLD, PC LUPOY SC-1004A, , , ,	DARK BLUE	H, 46
2	APEY00	PHONE	APEY0725001		BLACK	
3	ACGM00	COVER ASSY,REAR	ACGM0116001		WITHOUT COLOR	G
4	MBJL00	BUTTON,SIDE	MBJL0062401	COMPLEX, (empty), , , ,	DARK BLUE	40
4	MBJL01	BUTTON,SIDE	MBJL0062301	COMPLEX, (empty), , , ,	DARK BLUE	35
4	MCCC00	CAP,EARPHONE JACK	MCCC0057301	COMPLEX, (empty), , , ,	DARK BLUE	36
4	MCCG00	CAP,MULTIMEDIA CARD	MCCG0014201	COMPLEX, (empty), , , ,	DARK BLUE	42
4	MCJN00	COVER,REAR	MCJN0094401	MOLD, PC LUPOY SC-1004A, , , ,	DARK BLUE	39
4	MDAD00	DECO,CAMERA	MDAD0042101	ELECTROFORMING, Cu, , , ,	WITHOUT COLOR	45
4	MLAB00	LABEL,A/S	MLAB0001102	C2000 USASV DIA 4.0	WHITE	
4	MPBH00	PAD,MIKE	MPBH0044501	COMPLEX, (empty), , , ,	WITHOUT COLOR	38
4	MPBT00	PAD,CAMERA	MPBT0072001	COMPLEX, (empty), , , ,	WITHOUT COLOR	32
4	MPBU00	PAD,CONNECTOR	MPBU0057201	COMPLEX, (empty), , , ,	WITHOUT COLOR	33
4	MPBU01	PAD,CONNECTOR	MPBU0057101	COMPLEX, (empty), , , ,	WITHOUT COLOR	37
4	MTAB00	TAPE,PROTECTION	MTAB0289601	COMPLEX, (empty), , , ,	WITHOUT COLOR	41
4	MTAB01	TAPE,PROTECTION	MTAB0289501	COMPLEX, (empty), , , ,	WITHOUT COLOR	34
4	MTAK00	TAPE,CAMERA	MTAK0021501	COMPLEX, (empty), , , ,	WITHOUT COLOR	43
4	MWAE00	WINDOW,CAMERA	MWAE0037901	CUTTING, PMMA MR 200, , , ,	WITHOUT COLOR	44
3	ACGQ00	COVER ASSY,SLIDE	ACGQ0037601		BLACK	
4	ABGF00	BUTTON ASSY,MAIN	ABGF0010301		DARK BLUE	19
4	ABGG00	BUTTON ASSY,SUB	ABGG0008401		DARK BLUE	B, 14
4	ACGK00	COVER ASSY,FRONT	ACGK0130401		WITHOUT COLOR	
5	MDAG00	DECO,FRONT	MDAG0042701	MOLD, PC LUPOY SC-1004A, , , ,	DARK BLUE	18

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
5	MMAA00	MAGNET,SWITCH	MMAA0000601	LG-G510,511,512 common use, DIA : 3.0mm+1.5t	Silver	63
5	MPBH00	PAD,MIKE	MPBH0044601	COMPLEX, (empty), , , ,	WITHOUT COLOR	21
4	ACGS00	COVER ASSY,SLIDE(UPPER)	ACGS0021301		WITHOUT COLOR	A
5	MCJW00	COVER,SLIDE(UPPER)	MCJW0023301	CASTING, AI Alloy, , , , ,	SILVER	
5	MDAP00	DECO,SLIDE(UPPER)	MDAP0004901	MOLD, PC LUPOY SC-1004A, , , , ,	DARK BLUE	
5	MIAA00	INDICATOR,LED	MIAA0024001	MOLD, PMMA HI835M, , , , ,	WITHOUT COLOR	7
5	MPBG00	PAD,LCD	MPBG0089201	COMPLEX, (empty), , , , ,	WITHOUT COLOR	9
5	MPBN00	PAD,SPEAKER	MPBN0068201	COMPLEX, (empty), , , , ,	WITHOUT COLOR	11
5	MPBN01	PAD,SPEAKER	MPBN0068401	COMPLEX, (empty), , , , ,	WITHOUT COLOR	5
5	MPBZ00	PAD	MPBZ0225001	COMPLEX, (empty), , , , ,	WITHOUT COLOR	12
5	MTAA00	TAPE,DECO	MTAA0181601	COMPLEX, (empty), , , , ,	WITHOUT COLOR	3
5	MTAD00	TAPE,WINDOW	MTAD0102001	COMPLEX, (empty), , , , ,	WITHOUT COLOR	4
5	MTAF00	TAPE,MOTOR	MTAF0025801	COMPLEX, (empty), , , , ,	WITHOUT COLOR	10
5	MTAZ00	TAPE	MTAZ0229101	COMPLEX, (empty), , , , ,	WITHOUT COLOR	6
5	MTAZ02	TAPE	MTAZ0234101	COMPLEX, (empty), , , , ,	BLACK	
5	MWAC00	WINDOW,LCD	MWAC0103401	CUTTING, PMMA MR 200, , , , ,	WITHOUT COLOR	1
4	ARDY00	RAIL ASSY,SLIDE	ARDY0009201		WITHOUT COLOR	E, 23
4	GMEY00	SCREW MACHINE,BIND	GMEY0013801	1.4 mm,2.0 mm,MSWR3(FN) ,N ,+ ,NYLOK	SILVER	24
4	GMEY01	SCREW MACHINE,BIND	GMEY0022301	1.4 mm,3.5 mm,SWCH18A ,B ,+ ,BK ,; ,FH ,[empty] ,2.7 ,3.5 ,SWRCH ,BZN ,[empty] ,[empty]	BLACK	58
4	MCCH00	CAP,SCREW	MCCH0133401	COMPLEX, (empty), , , , ,	DARK BLUE	26
4	MCCH01	CAP,SCREW	MCCH0137701	COMPLEX, (empty), , , , ,	Without Color	25
4	MGAD01	GASKET,SHIELD FORM	MGAD0188601	CUTTING, NS, , , , ,	WITHOUT COLOR	48
4	MIDZ01	INSULATOR	MIDZ0198401	COMPLEX, (empty), , , , ,	WITHOUT COLOR	55
4	MIDZ02	INSULATOR	MIDZ0198501	COMPLEX, (empty), , , , ,	WITHOUT COLOR	60

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
4	MIDZ03	INSULATOR	MIDZ0198601	COMPLEX, (empty), , , , ,	WITHOUT COLOR	31
4	MIDZ04	INSULATOR	MIDZ0207001	CUTTING, NS, , , , ,	WITHOUT COLOR	59
4	MIDZ05	INSULATOR	MIDZ0207201	CUTTING, NS, , , , ,	WITHOUT COLOR	53
4	MPBF00	PAD,FLEXIBLE PCB	MPBF0040601	CUTTING, NS, , , , ,	WITHOUT COLOR	52
4	MPBJ00	PAD,MOTOR	MPBJ0061801	COMPLEX, (empty), , , , ,	WITHOUT COLOR	51
4	MPBN00	PAD,SPEAKER	MPBN0072001	CUTTING, NS, , , , ,	WITHOUT COLOR	49
4	MPBN01	PAD,SPEAKER	MPBN0072101	CUTTING, NS, , , , ,	WITHOUT COLOR	50
4	MTAB00	TAPE,PROTECTION	MTAB0302401	CUTTING, NS, , , , ,	WITHOUT COLOR	57
4	MTAB03	TAPE,PROTECTION	MTAB0302501	CUTTING, NS, , , , ,	WITHOUT COLOR	56
4	MTAC00	TAPE,SHIELD	MTAC0089301	CUTTING, NS, , , , ,	WITHOUT COLOR	54
6	ADCA00	DOME ASSY,METAL	ADCA0085801		WITHOUT COLOR	20
6	MTAG00	TAPE,BUTTON	MTAG0011901	COMPLEX, (empty), , , , ,	WITHOUT COLOR	
6	MTAG01	TAPE,BUTTON	MTAG0011801	COMPLEX, (empty), , , , ,	WITHOUT COLOR	
6	MTAJ00	TAPE,FLEXIBLE PCB	MTAJ0016101	COMPLEX, (empty), , , , ,	WITHOUT COLOR	
6	ADCA00	DOME ASSY,METAL	ADCA0085601		WITHOUT COLOR	15
3	GMEY00	SCREW MACHINE,BIND	GMEY0011201	1.4 mm,3 mm,MSWR3(BK) ,N ,+ ,NYLOK	Without Color	47
3	MCCF00	CAP,MOBILE SWITCH	MCCF0061101	CUTTING, NS, , , , ,	BLACK	
3	MLAA00	LABEL,APPROVAL	MLAA0062314	COMPLEX, (empty), , , , ,	WITHOUT COLOR	
5	ACKA00	CAN ASSY,SHIELD	ACKA0013401		SILVER	27
6	MCBA00	CAN,SHIELD	MCBA0036501	CUTTING, STS, , , , ,	WITHOUT COLOR	
6	MIDZ00	INSULATOR	MIDZ0200701	CUTTING, NS, , , , ,	WITHOUT COLOR	
5	MCBA00	CAN,SHIELD	MCBA0036101	CUTTING, STS, , , , ,	WITHOUT COLOR	29
5	MLAZ00	LABEL	MLAZ0038301	PID Label 4 Array	WITHOUT COLOR	

12. EXPLODED VIEW & REPLACEMENT PART LIST

12.2 Replacement Parts

<Main component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Description	Part Number	Spec	Color	Remark
1		GSM(SLIDE)	TGLL0022101			
4	SNGF00	ANTENNA,GSM,FIXED	SNGF0038102	3.0 ,-5.0 dBd,, ,internal, GSM850/900/1800/1900 ,; ,QUAD ,-5.0 ,50 ,3.0		30
4	SACY00	PCB ASSY,FLEXIBLE	SACY0085101			22
5	SACB00	PCB ASSY,FLEXIBLE,INSERT	SACB0051001			
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0078901			
6	SACC00	PCB ASSY,FLEXIBLE,SMT BOTTOM	SACC0054801			
7	C603	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	C606	CAP,CERAMIC,CHIP	ECCH0000701	1.2 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
7	CN600	CONNECTOR,BOARD TO BOARD	ENBY0033901	24 PIN,0.4 mm,ETC , ,P4S H=1.5, Header		
7	SW600	CONN,RF SWITCH	ENWY0005501	,SMD , dB , ; , 0.30MM ,STRAIGHT ,SOCKET ,SMD ,[empty] , [empty] , ,		
6	SACD00	PCB ASSY,FLEXIBLE,SMT TOP	SACD0068001			
7	LD600	DIODE,LED,CHIP	EDLH0013403	WHITE ,ETC ,R/TP ,3.8*1.2*0.6T ,; , [empty] ,2.9~3.2V ,20mA ,1200~1400mcd , ,126mW , [empty] , [empty] ,2P		
7	LD601	DIODE,LED,CHIP	EDLH0013403	WHITE ,ETC ,R/TP ,3.8*1.2*0.6T ,; , [empty] ,2.9~3.2V ,20mA ,1200~1400mcd , ,126mW , [empty] , [empty] ,2P		
7	MIC600	MICROPHONE	SUMY0010609	UNIT ,-42 dB,3.76*2.95*1.1 ,mems smd mic ,; , , OMNI ,[empty] , , [empty]		
7	R600	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
7	R601	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	SPCY00	PCB,FLEXIBLE	SPCY0164101	POLYI , mm,DOUBLE ,GD330 F_KEY ,; , , , , , , , ,		
4	SACY01	PCB ASSY,FLEXIBLE	SACY0085102			
5	SACB00	PCB ASSY,FLEXIBLE,INSERT	SACB0051002			
6	MTAC00	TAPE,SHIELD	MTAC0084201	COMPLEX, (empty), , , ,	WITHOUT COLOR	
6	MTAC01	TAPE,SHIELD	MTAC0084301	COMPLEX, (empty), , , ,	WITHOUT COLOR	
6	MTAC02	TAPE,SHIELD	MTAC0084401	COMPLEX, (empty), , , ,	WITHOUT COLOR	
6	MTAC03	TAPE,SHIELD	MTAC0089401	CUTTING, NS, , , , ,	WITHOUT COLOR	

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	MTAJ00	TAPE,FLEXIBLE PCB	MTAJ0016001	COMPLEX, (empty), , , , ,	WITHOUT COLOR	
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0078902			
6	SACC00	PCB ASSY,FLEXIBLE,SMT BOTTOM	SACC0054802			
6	SACD00	PCB ASSY,FLEXIBLE,SMT TOP	SACD0068002			
7	CN500	CONNECTOR,BOARD TO BOARD	ENBY0044601	54 PIN,0.4 mm,STRAIGHT , , , , , 0.40MM ,STRAIGHT ,MALE ,SMD ,[empty] , ,		
7	CN501	CONNECTOR,BOARD TO BOARD	ENBY0043101	70 PIN,0.4 mm,STRAIGHT , , , , , 0.40MM ,STRAIGHT ,MALE ,SMD ,[empty] , ,		
7	U500	IC	EUSY0343701	WSOF6 ,6 PIN,R/TP ,Luminance sensor ,; ,IC,A/D Converter		
6	SPCY00	PCB,FLEXIBLE	SPCY0164201	POLYI , mm,DOUBLE , , , , , , , , , , ,		
4	SAEY00	PCB ASSY,KEYPAD	SAEY0066201			D, 16
5	SAEB00	PCB ASSY,KEYPAD,INSERT	SAEB0029901			
5	SAEE00	PCB ASSY,KEYPAD,SMT	SAEE0033301			
6	SAEC00	PCB ASSY,KEYPAD,SMT BOTTOM	SAEC0032201			
7	C600	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C601	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C602	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C603	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
7	C604	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C605	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C606	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C607	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C608	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C609	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C610	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C611	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
7	C612	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C613	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C614	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C615	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
7	C616	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C617	CAP,CERAMIC,CHIP	ECCH0000151	4.7 nF,25V,K,X7R,HD,1005,R/TP		
7	C618	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C619	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
7	C620	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
7	CN600	CONNECTOR,BOARD TO BOARD	ENBY0044701	54 PIN,0.4 mm,STRAIGHT , , , , ,0.40MM ,STRAIGHT ,FEMALE ,SMD ,[empty] , ,		
7	CN601	CONNECTOR,FFC/FPC	ENQY0013901	35 PIN,0.3 mm,STRAIGHT , , , , ,0.30MM ,FPC ,STRAIGHT ,BOTH ,SMD ,R/TP ,[empty] ,		
7	R600	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
7	R601	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
7	R602	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R603	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R604	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R605	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R606	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R607	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R608	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R609	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R610	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
7	R611	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , , , , ,1800ohm , , , [empty] , R/TP		
7	R612	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , , , , ,1800ohm , , , [empty] , R/TP		
7	R613	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , , , , ,1800ohm , , , [empty] , R/TP		
7	U306	IC	EUSY0223002	HVSOF5 ,5 PIN,R/TP ,150mA CMOS LDO WITH OUTPUT CONTROL / 2.8V		
7	U600	IC	EUSY0336502	, PIN,R/TP , , , ,IC,Charge Pump		
7	U601	IC	EUSY0362601	SSON004 ,4 ,R/TP ,Hall IC , , ,IC,CMOS		
7	U602	IC	EUSY0373701	QFN ,16 ,R/TP , , , ,IC,PMIC		
7	VA600	VARISTOR	SEVY0004101	5.6 V ,SMD ,360pF, 1005		
7	VA601	VARISTOR	SEVY0004101	5.6 V ,SMD ,360pF, 1005		
7	VA602	VARISTOR	SEVY0003801	18 V ,SMD ,		
7	VA603	VARISTOR	SEVY0003801	18 V ,SMD ,		
7	VA604	VARISTOR	SEVY0003801	18 V ,SMD ,		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
7	VA605	VARISTOR	SEVY0003801	18 V , SMD ,		
7	VA606	VARISTOR	SEVY0003801	18 V , SMD ,		
7	VA607	VARISTOR	SEVY0003801	18 V , SMD ,		
7	VA608	VARISTOR	SEVY0003801	18 V , SMD ,		
6	SAED00	PCB ASSY,KEYPAD,SMT TOP	SAED0031601			
7	LD600	DIODE,LED,CHIP	EDLH0014801	WHITE ,ETC ,R/TP ,0.4t ; , [empty] ,3.0~3.2 ,30mA ,1200~1600mcd , ,120mW , [empty] , [empty] ,2P		
7	LD601	DIODE,LED,CHIP	EDLH0014801	WHITE ,ETC ,R/TP ,0.4t ; , [empty] ,3.0~3.2 ,30mA ,1200~1600mcd , ,120mW , [empty] , [empty] ,2P		
6	SPEY00	PCB,KEYPAD	SPEY0060901	FR-4 ,0.5 mm,BUILD-UP 4 , , , , , , , , , ,		
4	SJMY00	VIBRATOR,MOTOR	SJMY0007104	3 V ,.08 A,10*3 ,12mm ; ,3V , , ,12000 , , ,		62
4	SUSY00	SPEAKER	SUSY0027203	ASSY ,8 ohm,90 dB,1812 mm,10mm ; , , , , , , , , WIRE		13
4	SVLM00	LCD MODULE	SVLM0026901	Main ,2.2" ,240*320 ,40*57*1.5 ,262K ,TFT ,TM ,M_ST7636 S_NT7534 ,		C, 17
4	SWCC00	CABLE,COAXIAL	SWCC0005901	72 mm, LINE, ; , [empty] , [empty] , [empty] , [empty] , [empty]		61
3	SAFY00	PCB ASSY,MAIN	SAFY0304601			F, 28
4	SAFB00	PCB ASSY,MAIN,INSERT	SAFB0099001			
5	SVCY00	CAMERA	SVCY0019101	CMOS ,MEGA ,2M FF SS-LSI(1/4"),8.5x8.5x4.6, 90degree,FPCB		64
4	SAFF00	PCB ASSY,MAIN,SMT	SAFF0217401			
5	SAFC00	PCB ASSY,MAIN,SMT BOTTOM	SAFC0122201			
6	BAT100	MODULE,ETC	SMZY0018401	3.3V, Cap(0.07F) , Size(Coin, 4.8 x 1.4), Pb-Free ; ,Module Assembly		
6	C100	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C101	CAP,CHIP,MAKER	ECZH0000816	12 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C102	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C103	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C104	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C105	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C106	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C107	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C108	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , [empty] , [empty]		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C109	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C110	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C111	CAP,CERAMIC,CHIP	ECCH0000163	47 nF,10V,K,X5R,HD,1005,R/TP		
6	C112	CAP,CERAMIC,CHIP	ECCH0000151	4.7 nF,25V,K,X7R,HD,1005,R/TP		
6	C113	CAP,CERAMIC,CHIP	ECCH00006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C114	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C117	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , , [empty] , [empty] , [empty] , [empty] , [empty] , [empty] ,0.8 mm		
6	C118	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C119	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C120	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C121	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C122	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C123	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , , [empty] , [empty] , [empty] , [empty] , [empty] , [empty] ,0.8 mm		
6	C124	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C125	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C126	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C127	CAP,CHIP,MAKER	ECZH0001217	470 nF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C128	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C129	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C130	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C131	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C132	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C133	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C134	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C135	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C136	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C137	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C138	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C139	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C140	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C141	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C142	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C143	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C144	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C145	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C146	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C147	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C148	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C149	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C150	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C151	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C152	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , , [empty] , [empty] , [empty] , [empty] , [empty] , 0.8 mm		
6	C153	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , , [empty] , [empty] , [empty] , [empty] , [empty] , 0.8 mm		
6	C154	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C200	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C201	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C203	CAP,CHIP,MAKER	ECZH0003503	1 uF,25V ,K ,X5R ,HD ,1608 ,R/TP		
6	C204	CAP,CHIP,MAKER	ECZH0003503	1 uF,25V ,K ,X5R ,HD ,1608 ,R/TP		
6	C205	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C206	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C207	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C208	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C209	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C210	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C211	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C215	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C216	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C217	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C218	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C219	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C220	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C221	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C222	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C300	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C301	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		
6	C302	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , [empty] [empty] , [empty] , [empty] , [empty] , [empty] , 0.8 mm		
6	C303	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C304	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C305	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C308	CAP,CERAMIC,CHIP	ECCH0001001	6.8 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C310	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C311	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C312	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C313	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C314	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C315	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C316	CAP,CERAMIC,CHIP	ECCH0002002	47000 pF,10V ,K ,B ,HD ,1005 ,R/TP		
6	C317	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C318	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C319	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C320	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C321	CAP,CERAMIC,CHIP	ECCH0002002	47000 pF,10V ,K ,B ,HD ,1005 ,R/TP		
6	C322	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C323	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L_ESR ,1608 ,R/TP , , [empty] , [empty] [empty] , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C324	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C325	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C326	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C327	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C328	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C329	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C330	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C331	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C332	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C335	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C336	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	CN200	CONNECTOR,ETC	ENZY0016301	3 PIN,3.0 mm,ETC , ,H-2.0		
6	CN300	CONNECTOR,I/O	ENRY0006501	18 PIN,0.4 mm,ETC , ,1.2 Offset		
6	CN301	CONNECTOR,BOARD TO BOARD	ENBY0043001	70 PIN,0.4 mm,STRAIGHT , , , , ,0.40MM ,STRAIGHT ,FEMALE ,SMD ,[empty] , ,		
6	CN302	CONNECTOR,BOARD TO BOARD	ENBY0034001	24 PIN,0.4 mm,ETC , ,P4S H=1.5, Socket		
6	D300	DIODE,SWITCHING	EDSY0017601	USF ,30 V,1 A,R/TP , , , , ,22A , , ,667mW ,[empty] ,[empty] ,1		
6	FB100	FILTER,BEAD,CHIP	SFBH0008102	1800 ohm,1005 ,Bead		
6	FB101	FILTER,BEAD,CHIP	SFBH0008102	1800 ohm,1005 ,Bead		
6	FB102	FILTER,BEAD,CHIP	SFBH0008102	1800 ohm,1005 ,Bead		
6	FB300	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB301	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB302	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB303	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , , ,1800ohm , , ,[empty] ,R/TP		
6	FB306	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB307	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB309	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FL300	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p , , ,Filter,LCR		
6	FL301	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p , , ,Filter,LCR		
6	FL302	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p , , ,Filter,LCR		
6	FL303	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p , , ,Filter,LCR		
6	FL304	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p , , ,Filter,LCR		
6	L100	INDUCTOR,CHIP	ELCH0001052	18 nH,J ,1005 ,R/TP ,PBFREE		
6	L101	INDUCTOR,SMD,POWER	ELCP0009403	2.2 uH,M ,2.8*2.6*1 ,R/TP ,power inductor		
6	L300	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L301	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L302	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L303	INDUCTOR,CHIP	ELCH0003810	220 nH,G ,1608 ,R/TP ,		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	L304	RES,CHIP,MAKER	ERHZ0000701	0 ohm,1/10W ,J ,1608 ,R/TP		
6	L305	INDUCTOR,CHIP	ELCH0003810	220 nH,G ,1608 ,R/TP ,		
6	L306	INDUCTOR,CHIP	ELCH0003810	220 nH,G ,1608 ,R/TP ,		
6	L307	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	Q100	TR,BJT,NPN	EQBN0007601	SOT-23 ,0.15 W,R/TP ,EMT3		
6	R100	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R101	RES,CHIP,MAKER	ERHZ0000460	30 Kohm,1/16W ,J ,1005 ,R/TP		
6	R102	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
6	R103	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R104	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R105	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R106	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R107	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R108	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R109	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R113	RES,CHIP,MAKER	ERHZ0000245	220 Kohm,1/16W ,F ,1005 ,R/TP		
6	R114	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R115	RES,CHIP	ERHY0003601	2700 ohm,1/16W ,J ,1005 ,R/TP		
6	R116	RES,CHIP	ERHY0003601	2700 ohm,1/16W ,J ,1005 ,R/TP		
6	R117	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R118	RES,CHIP,MAKER	ERHZ0004201	121000 ohm,1/16W ,F ,1005 ,R/TP		
6	R119	RES,CHIP	ERHY0000289	270K ohm,1/16W,J,1005,R/TP		
6	R120	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R121	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R123	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R124	RES,CHIP	ERHY0000128	15K ohm,1/16W,F,1005,R/TP		
6	R125	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R126	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	R201	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R202	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R212	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R213	RES,CHIP,MAKER	ERHZ0000307	6200 ohm,1/16W ,F ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R214	RES,CHIP	ERHY0000129	18K ohm,1/16W,F,1005,R/TP		
6	R215	RES,CHIP	ERHY0000129	18K ohm,1/16W,F,1005,R/TP		
6	R217	RES,CHIP	ERHY0003601	2700 ohm,1/16W ,J ,1005 ,R/TP		
6	R218	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R227	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R228	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R300	RES,CHIP,MAKER	ERHZ0000529	1.5 Kohm,1/16W ,J ,1005 ,R/TP		
6	R301	RES,CHIP,MAKER	ERHZ0000460	30 Kohm,1/16W ,J ,1005 ,R/TP		
6	R302	RES,CHIP	ERHY0003401	1800 ohm,1/16W ,J ,1005 ,R/TP		
6	R303	RES,CHIP	ERHY0003401	1800 ohm,1/16W ,J ,1005 ,R/TP		
6	R304	RES,CHIP	ERHY0003401	1800 ohm,1/16W ,J ,1005 ,R/TP		
6	R305	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R306	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R307	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R308	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R309	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R310	RES,CHIP	ERHY0003401	1800 ohm,1/16W ,J ,1005 ,R/TP		
6	R311	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R314	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R315	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R316	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R319	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R320	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R321	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R322	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R323	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R324	RES,CHIP,MAKER	ERHZ0000407	1000 Kohm,1/16W ,J ,1005 ,R/TP		
6	R325	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R326	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R327	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R328	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R329	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R330	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R331	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R332	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R333	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R334	RES,CHIP,MAKER	ERHZ0000219	150 ohm,1/16W ,F ,1005 ,R/TP		
6	R336	RES,CHIP	ERHY0000161	200K ohm,1/16W,F,1005,R/TP		
6	R337	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R339	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R411	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	U100	IC	EUSY0266502	PBGA ,143 PIN,R/TP ,Triton, Analog Base Band		
6	U101	IC	EUSY0266401	PBGA ,293 PIN,R/TP ,Neptune, E-GPRS-MPU + C54x DSP		
6	U200	IC	EUSY0351601	DFN ,12 PIN,R/TP ,Dual Charger IC (Bypass) ,; ,IC,Charger		
6	U201	IC	EUSY0338204	FBGA ,107 ,ETC ,FULLY 1.8V 1G(LB/128Mx8) NAND+512M(8Mx4x16) SDRAM ,; ,IC,MCP		
6	U301	IC	EUSY0250501	SC70 ,5 PIN,R/TP ,Comparator, pin compatible to EUSY0077701		
6	U302	IC	EUSY0355501	PLP1010-4 ,4 PIN,R/TP ,1.8V 150mA Single LDO ,; ,IC,LDO Voltage Regulator		
6	U303	IC	EUSY0356501	QFN ,20 PIN,R/TP ,FM Tuner, 3*3*0.55 ,; ,IC Assembly		
6	U304	IC	EUSY0144701	SC70-5 ,5 PIN,R/TP ,INVERTER(Schmitt trigger), Pb Free		
6	U306	IC	EUSY0353901	PLP1010-4 ,4 PIN,R/TP ,1x1 LDO, 3.0V , 150mA ,; ,IC,LDO Voltage Regulator		
6	VA300	VARISTOR	SEVY0004101	5.6 V , ,SMD ,360pF, 1005		
6	VA301	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA302	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA303	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA304	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA305	VARISTOR	SEVY0004101	5.6 V , ,SMD ,360pF, 1005		
6	VA306	VARISTOR	SEVY0004101	5.6 V , ,SMD ,360pF, 1005		
6	VA307	VARISTOR	SEVY0004101	5.6 V , ,SMD ,360pF, 1005		
6	VA308	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA309	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA310	VARISTOR	SEVY0003801	18 V , ,SMD ,		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	VA311	VARISTOR	SEVY0003801	18 V ,SMD ,		
6	VA312	VARISTOR	SEVY0003801	18 V ,SMD ,		
6	VA313	VARISTOR	SEVY0004101	5.6 V ,SMD ,360pF, 1005		
6	VA314	VARISTOR	SEVY0003801	18 V ,SMD ,		
6	VA315	VARISTOR	SEVY0003801	18 V ,SMD ,		
6	VA316	VARISTOR	SEVY0003801	18 V ,SMD ,		
6	VA317	VARISTOR	SEVY0004101	5.6 V ,SMD ,360pF, 1005		
6	VA318	VARISTOR	SEVY0004101	5.6 V ,SMD ,360pF, 1005		
6	X100	X-TAL	EXXY0024301	32.768 KHz,20 PPM,12.5 pF,70 Kohm,SMD ,3.2*1.5*0.9 , -40°C ~ +85°C, C0 1.05pF, C1 fF ,; ,32.768 ,20PPM ,12.5 , ,, SMD ,R/TP		
5	SAFD00	PCB ASSY,MAIN,SMT TOP	SAFD0120001			
6	ANT400	ANTENNA,GSM,FIXED	SNGF0040001	3.0 ,-5.0 dBd,, ,internal, bluetooth chip, 8*2*2 ,; ,SINGLE , -5.0 ,50 ,3.0		
6	C202	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C212	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C213	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C214	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C223	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C224	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C225	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C226	CAP,TANTAL,CHIP	ECTH0005601	10 uF,10V ,M ,L _ESR ,1608 ,R/TP ,; , ,[empty] ,[empty] , ,[empty] , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C227	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C228	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C229	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C230	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C231	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C232	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C233	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C234	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C235	CAP,CHIP,MAKER	ECZH0003124	68 nF,16V ,K ,X7R ,HD ,1005 ,R/TP		
6	C236	CAP,CHIP,MAKER	ECZH0003124	68 nF,16V ,K ,X7R ,HD ,1005 ,R/TP		
6	C237	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C238	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C239	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C240	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C241	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C306	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C307	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C333	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C334	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C337	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C338	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C339	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C340	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C341	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C342	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C343	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C344	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C400	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C401	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C402	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C403	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C404	CAP,CHIP,MAKER	ECZH0001002	0.5 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C405	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C406	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C407	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C408	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C409	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C410	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C411	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C412	CAP,CHIP,MAKER	ECZH0001002	0.5 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C413	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C414	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C415	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C416	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C417	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C418	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C423	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C424	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C425	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C426	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C427	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C428	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C429	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C432	CAP,TANTAL,CHIP	ECTH0004804	33 uF,10V ,M ,L_ESR ,3216 ,R/TP		
6	C433	CAP,TANTAL,CHIP	ECTH0004804	33 uF,10V ,M ,L_ESR ,3216 ,R/TP		
6	C435	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C436	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C437	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C438	CAP,CHIP,MAKER	ECZH0000816	12 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C439	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C443	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C444	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C446	CAP,CHIP,MAKER	ECZH0000822	1.5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C447	CAP,CHIP,MAKER	ECZH0000802	1 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C449	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C451	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C452	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C453	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C454	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C455	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	CN303	CONNECTOR,BOARD TO BOARD	ENBY0020401	24 PIN,0.4 mm,ETC , ,H=0.9, Socket		
6	FB304	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , ; ,1800ohm , ; ,[empty] ,R/TP		
6	FB305	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead , ; ,1800ohm , ; ,[empty] ,R/TP		
6	FB308	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	FB310	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FB311	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FL305	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p ,; ,Filter,LCR		
6	FL306	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p ,; ,Filter,LCR		
6	FL307	FILTER,EMI/POWER	SFEY0015501	SMD ,Pb-free_4ch_5p-100ohm-5p ,; ,Filter,LCR		
6	FL400	FILTER,SEPERATOR	SFAY0011401	850.900 ,1800.1900 , dB, dB, dB, dB,4532 ,GSM Quad band FEM.		
6	FL401	FILTER,CERAMIC	SFCY0000701	2450 MHz,2.0*1.25*0.9 ,SMD ,Band Pass Filter for Bluetooth, Balanced type		
6	IC200	IC	EUSY0360201	CSP ,20 ,R/TP ,Class D(mono) + Capless HP + A/S ,; ,IC,Audio Sub System		
6	L200	INDUCTOR,CHIP	ELCH0010302	100 nH,J ,1608 ,R/TP ,chip coil		
6	L201	INDUCTOR,CHIP	ELCH0010302	100 nH,J ,1608 ,R/TP ,chip coil		
6	L400	INDUCTOR,CHIP	ELCH0004721	2.2 nH,S ,1005 ,R/TP ,		
6	L401	INDUCTOR,CHIP	ELCH0004721	2.2 nH,S ,1005 ,R/TP ,		
6	L402	INDUCTOR,CHIP	ELCH0003815	2.7 nH,S ,1005 ,R/TP ,		
6	L403	INDUCTOR,CHIP	ELCH0003815	2.7 nH,S ,1005 ,R/TP ,		
6	L404	INDUCTOR,CHIP	ELCH0003836	5.6 nH,S ,1005 ,R/TP ,MLCI		
6	L405	INDUCTOR,CHIP	ELCH0003819	12 nH,J ,1005 ,R/TP ,		
6	L406	INDUCTOR,CHIP	ELCH0003836	5.6 nH,S ,1005 ,R/TP ,MLCI		
6	L407	INDUCTOR,CHIP	ELCH0005010	1.8 nH,S ,1005 ,R/TP ,		
6	L408	INDUCTOR,CHIP	ELCH0003819	12 nH,J ,1005 ,R/TP ,		
6	L409	INDUCTOR,CHIP	ELCH0001426	8.2 nH,J ,1005 ,R/TP ,PBFREE		
6	L410	INDUCTOR,CHIP	ELCH0005010	1.8 nH,S ,1005 ,R/TP ,		
6	L411	INDUCTOR,CHIP	ELCH0003825	56 nH,J ,1005 ,R/TP ,chip inductor,PBFREE		
6	L412	INDUCTOR,CHIP	ELCH0005010	1.8 nH,S ,1005 ,R/TP ,		
6	L413	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	L414	INDUCTOR,CHIP	ELCH0005010	1.8 nH,S ,1005 ,R/TP ,		
6	PT400	THERMISTOR	SETY0006501	NTC ,22000 ohm,SMD ,1005, ECTH 1005 Series, Pb Free		
6	R111	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R200	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R203	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R204	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R205	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R206	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R207	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R208	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R209	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R210	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R211	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R216	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R220	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R223	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R224	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R225	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R226	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R229	RES,CHIP,MAKER	ERHZ0000534	8.2 ohm,1/16W ,J ,1005 ,R/TP		
6	R230	RES,CHIP,MAKER	ERHZ0000534	8.2 ohm,1/16W ,J ,1005 ,R/TP		
6	R312	RES,CHIP,MAKER	ERHZ0000516	820 Kohm,1/16W ,J ,1005 ,R/TP		
6	R313	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R317	RES,CHIP,MAKER	ERHZ0000422	15 Kohm,1/16W ,J ,1005 ,R/TP		
6	R318	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R340	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R341	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R342	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R401	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R402	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		
6	R403	RES,CHIP,MAKER	ERHZ0000287	47 Kohm,1/16W ,F ,1005 ,R/TP		
6	R404	RES,CHIP	ERHY0000140	36K ohm,1/16W,F,1005,R/TP		
6	R405	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R406	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	R408	RES,CHIP,MAKER	ERHZ0000474	390 ohm,1/16W ,J ,1005 ,R/TP		
6	S200	CONN,SOCKET	ENSY0017901	14 PIN,ETC , ,2.54 mm,Micro-SD, UIM Dupli Socket		
6	SPFY00	PCB,MAIN	SPFY0192501	FR-4 ,0.8 mm,STAGGERED-10 ,,, ,,,,,,		
6	SW400	CONN,RF SWITCH	ENWY0001801	STRAIGHT ,SMD ,2 dB,3000PCS/REEL		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	SW401	CONN,RF SWITCH	ENWY0005601	,SMD , dB, , ; ,0.30MM ,STRAIGHT ,SOCKET ,SMD ,[empty] ,[empty] , ,		
6	U204	IC	EUSY0363501	uMLF ,10 ,R/TP ,0.4ohm Audio Analog Switch , ; ,IC,Analog Switch		
6	U300	IC	EUSY0250501	SC70 ,5 PIN,R/TP ,Comparator, pin compatible to EUSY0077701		
6	U305	IC	EUSY0355701	PLP1010-4 ,4 PIN,R/TP ,150mA 2.8V Single LDO , ; ,IC,Voltage Regulator		
6	U307	IC	EUSY0355501	PLP1010-4 ,4 PIN,R/TP ,1.8V 150mA Single LDO , ; ,IC,LDO Voltage Regulator		
6	U308	IC	EUSY0369401	PLP1010 ,4 ,R/TP ,150mA LDO , ; ,IC,LDO Voltage Regulator		
6	U400	IC	EUSY0345901	WDFN ,8 PIN,R/TP ,2X2 Dual LDO 2.8V/2.8V 300mA/300mA , ; ,IC,LDO Voltage Regulator		
6	U401	IC	EUSY0316802	BGA ,72 PIN,R/TP ,EDGE Transceiver, 5X5 Size, B6PLE , ; ,IC,RF Amplifier		
6	U402	PAM	SMPY0017501	dBm, % , A, dBc, dB,6x6x1 ,SMD ,TI Neptune. Linear Edge , ; , , , , , , , ,R/TP ,R/TP ,		
6	U403	IC	EUSY0311701	uBGA ,63 PIN,R/TP ,Bluetooth Single-chip(v2.0+EDR),4.5x4.5x0.8		
6	VA200	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA201	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA202	VARISTOR	SEVY0003801	18 V , ,SMD ,		
6	VA319	VARISTOR	SEVY0004101	5.6 V , ,SMD ,360pF, 1005		
6	X400	X-TAL	EXXY0019501	26 MHz,10 PPM,8 pF,50 ohm,SMD ,3.2*2.5*0.6 ,		